

## Appendix A: Low Income and Disadvantaged Communities (LIDAC) in the nine- county Genesee Finger Lakes Region

\*Designated using the EPA Environmental Justice Screening Tool

\*\* Designated using the NYS Disadvantaged Communities Tool

Census Tract	County	EJ Screen Designated *	NYS DAC Designation **	Population
36037951000	Genesee	Yes	Yes	2,498
36037950700	Genesee	Yes	Yes	2,151
36037950300	Genesee		Yes	6,046
36037940100	Genesee	Yes	Yes	458
36051030900	Livingston		Yes	2,931
36055015304	Monroe		Yes	4,232
36055015102	Monroe		Yes	4,269
36055014602	Monroe		Yes	4,796
36055014302	Monroe		Yes	4,872
36055014301	Monroe		Yes	2,807
36055014202	Monroe		Yes	6,687
36055014104	Monroe		Yes	3,649
36055013902	Monroe		Yes	4,216
36055013604	Monroe		Yes	5,398
36055013401	Monroe	Yes	Yes	4,252
36055013104	Monroe	Yes	Yes	4,885
36055013001	Monroe		Yes	7,741
36055011603	Monroe		Yes	1,087
36055010902	Monroe		Yes	3,144
36055010901	Monroe	Yes	Yes	4,705
36055009604	Monroe	Yes	Yes	728
36055009603	Monroe	Yes	Yes	2,397
36055009602	Monroe	Yes	Yes	1,889
36055009601	Monroe	Yes	Yes	1,492
36055009500	Monroe	Yes	Yes	3,177
36055009400	Monroe	Yes	Yes	4,672
36055009302	Monroe	Yes	Yes	1,671
36055009301	Monroe	Yes	Yes	2,341
36055009200	Monroe	Yes	Yes	1,168
36055008800	Monroe	Yes	Yes	2,468
36055008702	Monroe	Yes	Yes	1,537
36055008701	Monroe	Yes	Yes	3,589
36055008600	Monroe		Yes	4,292
36055008500	Monroe	Yes	Yes	3,406
36055008400	Monroe	Yes	Yes	3,030
36055008301	Monroe	Yes	Yes	4,648
36055008200	Monroe	Yes	Yes	2,983
36055008100	Monroe	Yes	Yes	4,670
36055008000	Monroe	Yes	Yes	2,133
36055007900	Monroe		Yes	1,764
36055007700	Monroe		Yes	2,614
36055007500	Monroe	Yes	Yes	2,492
36055007100	Monroe	Yes	Yes	3,257
36055007000	Monroe		Yes	2,992
36055006900	Monroe	Yes	Yes	1,856
36055006800	Monroe	Yes	Yes	2,888
36055006700	Monroe	Yes	Yes	2,894

Census Tract	County	EJ Screen Designated *	NYS DAC Designation **	Population
36055006600	Monroe	Yes	Yes	1,936
36055006500	Monroe	Yes	Yes	1,599
36055006400	Monroe	Yes	Yes	2,234
36055006300	Monroe	Yes	Yes	3,052
36055006200	Monroe	Yes	Yes	2,441
36055005900	Monroe	Yes	Yes	1,487
36055005800	Monroe	Yes	Yes	4,265
36055005700	Monroe	Yes	Yes	1,434
36055005600	Monroe	Yes	Yes	2,286
36055005500	Monroe	Yes	Yes	1,889
36055005400	Monroe	Yes	Yes	3,620
36055005300	Monroe	Yes	Yes	1,765
36055005200	Monroe	Yes	Yes	1,462
36055005100	Monroe	Yes	Yes	1,185
36055005000	Monroe	Yes	Yes	1,959
36055004900	Monroe	Yes	Yes	2,121
36055004800	Monroe	Yes	Yes	2,375
36055004702	Monroe	Yes	Yes	2,208
36055004701	Monroe	Yes	Yes	2,934
36055004602	Monroe	Yes	Yes	2,072
36055004100	Monroe	Yes	Yes	1,287
36055004000	Monroe	Yes	Yes	1,400
36055003900	Monroe	Yes	Yes	2,067
36055003805	Monroe		Yes	6,883
36055003300	Monroe	Yes	Yes	1,520
36055003200	Monroe	Yes	Yes	1,645
36055003000	Monroe	Yes	Yes	2,154
36055002700	Monroe	Yes	Yes	1,401
36055002400	Monroe	Yes	Yes	3,345
36055002300	Monroe	Yes	Yes	3,904
36055002200	Monroe	Yes	Yes	3,445
36055002100	Monroe	Yes	Yes	4,373
36055002000	Monroe	Yes	Yes	5,171
36055001900	Monroe	Yes	Yes	2,813
36055001800	Monroe	Yes	Yes	4,475
36055001500	Monroe	Yes	Yes	782
36055001300	Monroe	Yes	Yes	1,933
36055000700	Monroe	Yes	Yes	1,916
36055000200	Monroe	Yes	Yes	1,929
36069051800	Ontario	Yes	Yes	2,677
36069051700	Ontario	Yes	Yes	1,977
36069050302	Ontario		Yes	4,907
36069050301	Ontario		Yes	4,326
36073401200	Orleans	Yes	Yes	3,516
36073040802	Orleans	Yes	Yes	3,757
36073040700	Orleans	Yes	Yes	5,844
36073040500	Orleans	Yes	Yes	2,631
36073040300	Orleans		Yes	2,450
36099950400	Seneca		Yes	2,564
36099950300	Seneca		Yes	3,731
36099950200	Seneca		Yes	2,429
36117021800	Wayne	Yes	Yes	2,075
36117021700	Wayne		Yes	3,911

Census Tract	County	EJ Screen Designated *	NYS DAC Designation **	Population
36117021600	Wayne		Yes	3,880
36117021502	Wayne	Yes	Yes	4,144
36117021400	Wayne	Yes	Yes	3,292
36117021200	Wayne	Yes	Yes	4,642
36117021100	Wayne	Yes	Yes	4,807
36117020900	Wayne		Yes	5,409
36123150100	Yates	Yes	Yes	6,288
36037950800	Genesee	Yes		2,766
36055003400	Monroe	Yes		2,582
36055013103	Monroe	Yes		6,186
36055015301	Monroe	Yes		2,887
36073040400	Orleans	Yes		3,239
36073040600	Orleans	Yes		7,310
36099950800	Seneca	Yes		5,947
36099950900	Seneca	Yes		3,957
36121970800	Wyoming	Yes		2,856

## Appendix B: 2010 Finger Lakes Regional GHG Inventory

The MSA PCAP includes transportation, commercial and residential buildings/infrastructure, and municipal operations. Each sector, including the ones that are included in this PCAP will be updated during the Comprehensive Climate Action Plan.

The PCAP is based on an existing 2010 regional GHG inventory developed by CDRPC for NYSEDA's Regional Sustainability Plan Initiative. The chart to the right includes select emissions sources that are or will be impacted through the PCAP and CCAP processes. See the tab REDC Emission by Source for a complete breakdown of emissions by source, sector, and scope.

[https://climatesmart.ny.gov/fileadmin/csc/documents/GHG\\_Inventories/capdistghginven.pdf](https://climatesmart.ny.gov/fileadmin/csc/documents/GHG_Inventories/capdistghginven.pdf)

Sector	Subsector	GHG Source	Activity	Value	GHG Emissions
Built Environment	Residential	Electricity	MMBTU	15,093,554	1,044,371
		Natural Gas	MMBTU	46,303,439	2,457,416
		Propane	MMBTU	205,344	12,627
		Fuel Oil (#1,#2,#4)	MMBTU	216,103	16,037
	Commercial	Electricity	MMBTU	14,506,538	1,003,753
		Natural Gas	MMBTU	30,013,998	1,592,903
		Propane	MMBTU	825,329	50,751
		Fuel Oil (#1,#2,#4)	MMBTU	141,697	10,515
	Industrial	Electricity	MMBTU	8,564,870	592,630
		Natural Gas	MMBTU	5,289,881	280,745
		Propane	MMBTU	2,459	151
		Fuel Oil	MMBTU	170,449	12,649
	Energy Generation	Electricity	MMBTU		
		Natural Gas	MMBTU	1,751,439	92,952
		Fuel Oil	MMBTU	154,987	
		Coal	MMBTU	15,706,588	1,493,806
	Fugative Emissions	Natural Gas	MMBTU (leaked)		615,180
Transportation	Onroad	Gasoline	MMBTU	65,172,504	4,592,641
		Diesel	MMBTU	10,530,485	781,457
	Offroad	Gasoline	MMBTU	10,835,100	763,539
		Diesel	MMBTU	-	-
	Rail	Diesel	MMBTU	1,421,471	105,486
	Marine	Gasoline	MMBTU	-	-
		Fuel Oil (#1,#2,#4)	MMBTU	218,101	16,185
Industrial Process		Cement Production			37,292
	Refrigerant Use	All Refrigerants (HFC)			278,673
Waste	Solid waste	Landfills/Incineration	MSW Tons		326,347
	Waste Water	WWTPs / Septics			120,000
Agriculture		Livestock			851,156
		Fertilizer			61,934

## Appendix C: GHG Reduction Measures & Benefits Analysis

Transportation						
Strategy 1: Transition to Zero Emission Vehicles and Equipment For Municipal and Private fleets		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		6,251,898.58	423,792.05	2,681,894.79		
Description of Measure						
A	Encourage municipalities and public fleets to complete fleet inventories, adopt fleet efficiency policies, and invest in zero-emissions light, medium, and heavy duty fleets when technology is available.	107,481.96	18,205.10	55,800.25	Municipalities Businesses	Short: <1 Yrs
B	Encourage residents, business's, transport industries, and private fleet operators to invest in zero emission light, medium, and heavy duty fleets when technology is available.	5,374,097.96	317,788.98	2,209,695.86	Municipalities Businesses RTS	Medium: 1-4 Yrs
C	Transition non-road equipment to zero-emission, from small lawn equipment, to offroad agriculture and construction equipment.	763,538.68	87,107.70	412,947.32	Municipalities Businesses RTS	Medium: 1-4 Yrs
D	Transition school buses to zero emission.	6,779.98	690.27	3,451.37	Municipalities Businesses	Medium: 1-4 Yrs
E	Expand EV charging infrastructure in municipal lots and private parking lots/garages at points of interest (centers of employment, schools, grocery stores etc.), and incentives residential charging.	quantified holistically as part of strategy 1			Municipalities Businesses Developers Landlords	Medium: 1-4 Yrs
F	Expedite and standardize permitting for installation of alternative fuel and electric vehicle charging infrastructure.	quantified holistically as part of strategy 1			Municipalities	Medium: 1-4 Yrs
Strategy 2: Enhance Public Transportation Services		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		1,476,144.19	40,114.69	144,123.69		
Description of Measure						
A	Invest in zero-emissions transit vehicles using battery electric and hydrogen vehicles.	17,002.92	3,636.15	10,369.07	RTS	Medium: 1-4 Yrs
B	Shift Single Occupancy Vehicle Trips to RGRTA Through Increased and Improved Services by funding projects and plans to improve enhance and expand RGRTA services, to shift trips using individual vehicles to lower-polluting modes and reduce single occupancy vehicle dependency.	243,190.21	24,319.02	60,797.55	RTS State	Medium: 1-4 Yrs
C	Support shared-mobility services to reduce Vehicle Miles Traveled (VMT).	1,215,951.06	12,159.51	72,957.06	RTS Municipalities GTC	Short: <1 Yrs
D	Evaluate potential for BRT, light rail or fixed transit service serving major employers/destinations.	not quantified			RTS Municipalities	Short: <1 Yrs
E	Invest in an educational campaign to educate all road users of best practices for use of public transportation and alternatives modes of transportation. Establish a coalition to increase public transit ridership and service.	not quantified			RTS Municipalities GTC	Short: <1 Yrs
Strategy 3: Expand the Availability of Low-Carbon Active Transportation Alternatives		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		918,528.23	91,852.82	229,632.06		
Description of Measure						
A	Educate and reward residents for purchasing zero-emission vehicles, bike/walk, or take public transit.	quantified holistically as part of strategy 3			Municipalities Businesses Transportation advocates	Short: <1 Yrs
B	Work with large employers, municipalities, etc. to promote transportation demand management strategies to increase the share of employers who walk/bicycle or take public transportation to work to work.	quantified holistically as part of strategy 3			Businesses	Short: <1 Yrs
C	Continue to expand community wide bike network (including protected bike lanes), bike infrastructure networks, bike rental/share programs, regional trails, and close funding gaps.	quantified holistically as part of strategy 3			Municipalities Businesses RTS	Short: <1 Yrs
D	Encourage increased implementation of e-bikes, e-scooters and the support infrastructure through subsidies, discounts, or rebates to consumers for purchasing e-bikes and e-scooters. Introduce options for direct purchase or reimbursements to local governments and mobility operators to build and install charging infrastructure, including for mobility assistance devices, to encourage more use of these modes throughout the Region.	quantified holistically as part of strategy 3			Municipalities Transportation advocates	Short: <1 Yrs
Strategy 4: Promote Smart Growth and Mobility-Oriented Development to Reduce Vehicle Miles Traveled (VMT)		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		5,374,097.96	177,345.23	443,363.08		
Description of Measure						
A	Implement complete streets policies safe routes to school as well as integrate complete street standards into zoning and design standard language.	quantified holistically as part of strategy 4			Municipalities State	Medium: 1-4 Yrs
B	Incentivize alternative modes & fuel vehicles by designating preferred parking in public parking facilities for alternative fuel vehicles, carpools, bike parking, etc.	quantified holistically as part of strategy 4			Municipalities State	Medium: 1-4 Yrs
C	Institute a regional ADA compliant retrofit program	quantified holistically as part of strategy 4			Municipalities State	Medium: 1-4 Yrs
D	Incentivize mixed use/mixed income development in city, town, and village centers	not quantified			Municipalities	Medium: 1-4 Yrs
E	Incentivize, then require through zoning and site review standards, green infrastructure, considerations for public transportation, and bike and pedestrian circulation in development projects.	quantified holistically as part of strategy 4			Municipalities	Medium: 1-4 Yrs
Strategy 5: Enhance Public Safety		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		not quantified	not quantified	not quantified		
Description of Measure						
A	Encourage replacing traffic lights with roundabouts where feasible to reduce time idling and improve traffic safety.	not quantified			State Municipalities	Medium: 1-4 Yrs
B	Develop criteria for identifying potential candidate roadways for road diets and reduced speeds region-wide	not quantified			State Municipalities	Medium: 1-4 Yrs
C	Create low-emission zones (anti-idling) centered around environmental justice communities, school zones, pedestrian-centric areas, and transit stations.	not quantified			State Municipalities	Medium: 1-4 Yrs

Buildings & Infrastructure						
Strategy 1: Advance the Decarbonization of Buildings and Infrastructure		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement	Time Frame
		6,188,372.17	387,997.77	1,589,378.55		
	Description of Measure					
A	Transition to air-source and ground source heat pumps and heat pump water heaters in residents and business and use for new and renovative development.	2,541,367.88	337,873.56	1,351,494.23	State Municipalities Businesses Developers Landlords Residents	Medium: 1-4 Yrs
B	Implement air-source heat pumps and geothermal energy networks for municipal buildings, and pilot net-zero buildings.	16,541.69	2,199.21	8,796.84	State Municipalities	Medium: 1-4 Yrs
C	Explore a pilot program for geothermal energy networks on a community scale in new and for existing developments.	61,883.72	500.00	2,000.00	Municipalities	Medium: 1-4 Yrs
D	Establish financing mechanisms for energy efficiency upgrades, and for heat pumps, for commercial and residential buildings with focus on LIDAC communities.	4,140,248.55	41,402.49	207,012.43	Municipalities NYSERDA Housing authorities Housing advocates Developers Landlords	Medium: 1-4 Yrs
E	Invest in energy management planning and projects to reduce energy use and lower GHG emissions at municipal facilities including benchmarking and organics waste diversion.	no quantified			Municipalities	Short: <1 Yrs
F	Expand purchase of renewable electricity for municipal facilities, and install renewable energy at facilities.	20,075.06	6,022.52	20,075.06	Municipalities	Short: <1 Yrs
G	Reduce the water and GHG emission of water and sewer infrastructure through efficiency upgrades and leakage emissions initiatives.	1,000 metric tons (MT) of CO2 emissions and 540 million gallons of leakage avoidance over a 10-year evaluation horizon *GHG emissions calculation is not included in benefits analysis			Municipalities	Medium: 1-4 Yrs
Strategy 2: Adopt Zero-Emission Codes and Standards		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/ Lead Agency	Time Frame
		6,188,372.17	123,767.44	2,165,930.26		
	Description of Measure					
A	Reduce Embodied Carbon from Building Construction by promoting localized construction materials, deconstruction, reuse of materials, and recycling and minimizing construction waste	not quantified			State Municipalities	medium: 1-4 Yrs
B	Follow state-wide guidance and policies so that all newly constructed and renovated buildings to meet high performance building standards and equipment such as Leadership in Energy and Environmental Design (LEED) certification, ENERGY STAR, or net zero energy ready standard.	not quantified			State Municipalities Businesses Developers	Short: <1 Yrs
C	Modify historic building standards in local buildings and zoning codes to allow for opportunities to increase energy efficiency in historical preservation districts. Educate planning boards and	not quantified			Municipalities	Short: <1 Yrs
D	Adopt minimum energy efficiency standards for rental properties with the certificate of occupancy	not quantified			Municipalities	Short: <1 Yrs
Strategy 3: Develop Programs, Provide Tools, and Strategies That Reduce Energy Efficiency Barriers in Buildings and Infrastructure.		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/ Lead Agency	Time Frame
		6,188,372.17	309,418.61	618,837.22		
	Description of Measure					
A	Incentivize building envelope insulation efforts and energy efficient purchases by supporting investments in certified energy-efficient appliances, heating and cooling equipment, indoor and outdoor lighting, and building products to replace older less efficient equipment. Support programs for end-of-use energy efficiency measures such as building envelope insulating, mold abatement, asbestos removal, and hazard remediation in all existing buildings.	not quantified			State Municipalities NYSERDA	Medium: 1-4 Yrs
B	Encourage and incentive resident and businesses to conduct energy audits promote the cost benefits of transitioning to renewable energy.	not quantified			Municipalities Businesses Landlords Residents	Short: <1 Yrs
C	Develop a region-wide strategy to expand solar everywhere, with an emphasis on low- and moderate-income households.	not quantified			State Municipalities Utilities NYSERDA	Short: <1 Yrs
D	Support municipalities for creating benchmarking and energy use disclosure laws for all buildings over 5,000 sq. ft	not quantified			State Municipalities Utilities	Medium: 1-4 Yrs
E	Provide gap funding to support pre-weatherization work for mold removal, panel upgrades, and other things that need to be done before energy efficiency upgrades are made.	not quantified			Municipalities NYSERDA Housing authorities Housing advocates Developers Landlords	Medium: 1-4 Yrs
Strategy 4: Develop a Resilient Energy portfolio Through Diversified Sources and Local Generation		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/ Lead Agency	Time Frame
		6,634,718.95	331,735.95	730,423.91		
	Description of Measure					
A	Explore municipal and emergency operations resiliency and integration of battery storage and microgrid technologies for weather resistant operations.	not quantified			Municipalities NYSERDA	Medium: 1-4 Yrs
B	Target installation of renewable energy sources for new developments.	6,188,372.17	309,418.61	618,837.22	Municipalities	Medium: 1-4 Yrs
C	Generate renewable energy with landfill gas and install solar on landfills.	446,346.78	22,317.34	111,586.69	Municipalities Businesses	Medium: 1-4 Yrs

Economy-Wide						
Strategy 1: Build Citizen Support for Climate Action		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/Lead Agency	Time Frame
		13,964,118.63	279,282.37	698,205.93		
Description of Measure						
A	Provide community-wide education on rebates and incentives related to grant funding for climate-related improvements.	quantified holistically as part of strategy 1			State Municipalities NYSERDA	Short: <1 Yrs
B	Provide information businesses, and residents converting to renewable energy sources.	quantified holistically as part of strategy 2			State Municipalities NYSERDA	Short: <1 Yrs
C	Create a recurring community climate public forum for region-wide sustainability goals.	quantified holistically as part of strategy 3			State Municipalities G/FLRPC	Short: <1 Yrs
D	Support community organizations serving underrepresented populations to assist with accessibility of affordable clean energy and energy efficiency improvements.	quantified holistically as part of strategy 4			G/FLRPC Higher education	Short: <1 Yrs
E	Support the increased participation in the Color Your Community and Color Your Organization Green groups.	quantified holistically as part of strategy 5			Municipalities Community groups G/FLRPC CSA	Short: <1 Yrs
Strategy 2: Build Municipal Capacity for Climate Action		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/Lead Agency	Time Frame
		279,282.37	27,928.24	55,856.47		
Description of Measure						
A	Increase the participation for local municipalities to pursue CSC/CEC certification and begin implementing action items.	quantified holistically as part of strategy 2			State Municipal	Medium: 1-4 Yrs
B	Develop a region-wide or sector-based green bank for loans, credit enhancements, and creation of new grant financing methods to scale up energy efficiency and renewables to strengthen the green regenerative economy.	quantified holistically as part of strategy 2			Municipal Businesses	Medium: 1-4 Yrs
C	Take advantage of state and federal finance mechanisms for carbon reducing programs and implementation projects.	quantified holistically as part of strategy 2			State G/FLRPC	Short: <1 Yrs
D	Create a GHG inventory dashboard for municipalities.	quantified holistically as part of strategy 2			State G/FLRPC	Medium: 1-4 Yrs
Strategy 3: Create Healthy and Sustainable Communities		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/Lead Agency	Time Frame
		5,374,097.96	89,478.73	178,957.46		
Description of Measure						
A	Consistently train local boards and officials in site plan and regulatory review that promotes more sustainable site design and development.	quantified holistically as part of strategy 3			State Municipalities G/FLRPC	Short: <1 Yrs
B	Encourage redevelopment of areas targeted for infill that are within public transit or walkable neighborhoods.	quantified holistically as part of strategy 3			State Municipalities	Short: <1 Yrs
C	Incorporate GHG reduction and sustainability measures into local and regional level planning documents, such as comprehensive plans, stormwater management plans, farmland and agricultural protection plans, watershed management plans, Comprehensive Economic Development Strategy, etc.	quantified holistically as part of strategy 3			Municipalities	Medium: 1-4 Yrs
D	Modernize zoning policies to allow multi-family units to be built on single family lots and increasing mixed-use development zoned areas to create more walkable areas.	quantified holistically as part of strategy 3			Municipalities	Medium: 1-4 Yrs
E	Plan for the future by providing assistance to local governments to develop plans and edit codes to encourage infill, compact development, transit-oriented and transit- supportive development, and new paved trails throughout the region. Plan for and support nonvehicular infrastructure investments in road projects that add, or enhance the safety of, pedestrian and bicycle infrastructure.	quantified holistically as part of strategy 3			State Municipalities GTC Community Groups	
Strategy 4: Support Clean Energy Policy and Growth		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/Lead Agency	Time Frame
		6,188,372.17	309,418.61	618,837.22		
Description of Measure						
A	Develop models and toolkits for zoning and development of renewable energy sources.	not quantified			State Municipalities G/FLRPC	Short: <1 Yrs
B	Work with utility companies to conduct a study to determine existing and future electric grid demand capacity.	not quantified			State Utilities	Medium: 1-4 Yrs
C	Municipalities in the MSA to advocate for utilities to develop large-scale renewable energy generation to supply clean electricity to the region.	not quantified			State Municipalities Utilities Public Service Commission Community Groups	Medium: 1-4 Yrs
Strategy 5: Expand and Fund Educational Programming That Supports the Growth of the Green Economy		Baseline GHG	GHG Reduction by 2030	GHG Reduction by 2050	Authority to Implement/Lead Agency	Time Frame
		not quantified	not quantified	not quantified		
Description of Measure						
A	Provide workforce development services to connect community members with jobs in energy efficiency fields	not quantified			Municipalities Businesses Higher Education	Medium: 1-4 Yrs
B	Partner with educational institutions that have training programs that support and attract labor force and industries using green technologies.	not quantified			Municipalities Businesses Higher Education	Short: <1 Yrs
C	Advocate/coordinate for a clean energy workforce development training center that targets marginalized communities	not quantified			Municipalities Businesses Higher Education	Short: <1 Yrs
D	Develop opportunities for workforce development in zero emission infrastructure and vehicle maintenance.	not quantified			Municipalities Businesses Higher Education	Short: <1 Yrs
E	Use building demonstration sites as locations for community education and outreach.	not quantified			Municipalities Businesses	Medium: 1-4 Yrs



## Appendix D: Federal Infrastructure Investment & Jobs Act Funding for Climate Action

### Transportation Sector

Federal Program	Amount	Description
<a href="#">Congestion Mitigation and Air Quality Improvement Program (CMAQ)</a>	\$13,200,000,000	Provides funds to States for transportation projects designed to reduce traffic congestion and improve air quality, particularly in areas of the country that do not attain national air quality standards
<a href="#">Rebuilding American Infrastructure with Sustainability and Equity (RAISE)</a>	\$7,500,000,000	Provides a unique opportunity for the DOT to invest in road, rail, transit and port projects that promise to achieve national objectives.
<a href="#">Carbon Reduction Program</a>	\$6,419,999,998	Provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources.
<a href="#">Metropolitan Planning</a>	\$2,280,000,000	Establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas.
<a href="#">Congestion Relief Program</a>	\$250,000,000	Advance innovative, integrated, and multimodal solutions to reduce congestion and the related economic and environmental costs in the most congested metropolitan areas with an urbanized area population of 1 million+.
<a href="#">Federal-State Partnership for Intercity Passenger Rail Grants</a>	\$36,000,000,000	Provides funding for capital projects that reduce the state of good repair backlog, improve performance, or expand or establish new intercity passenger rail service, including privately operated intercity passenger rail service, if an eligible applicant is involved.
<a href="#">Restoration and Enhancement Grant Program</a>	\$250,000,000	Funds operating assistance grants for initiating, restoring, or enhancing intercity passenger rail.
<a href="#">Safe Streets and Roads for All</a>	\$5,000,000,000	Grant program is to be awarded on a competitive basis to support planning, infrastructure, behavioral, and operational initiatives to prevent death and serious injury on roads and streets involving all roadway users, including pedestrians; bicyclists; public transportation, personal conveyance, and micro mobility users; motorists; and commercial vehicle operators.
<a href="#">Intelligent Transportation Systems (ITS) Program</a>	\$250,000,000	Fosters innovation in transportation through the deployment of technology to enhance safety and efficiency while reducing environmental impacts of surface transportation, resulting in improved access and convenience, saved lives and time, and increased productivity.
<a href="#">Urbanized Area Formula Grants</a>	\$33,390,947,107	Program (49 U.S.C. 5307) makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning.
<a href="#">Bus and Bus Facilities Formula/Competitive Grants</a>	\$3,161,294,400	Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.
<a href="#">Enhanced Mobility of Seniors and Individuals with Disabilities</a>	\$2,193,105,343	Program (49 U.S.C. 5310) provides formula funding to states for the purpose of assisting private nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs.
<a href="#">All Stations Accessibility Program</a>	\$1,750,000,000	Provides capital funding to upgrade the accessibility of legacy rail fixed guideway public transportation systems for people with disabilities, including those who use wheelchairs.
<a href="#">Strengthening Mobility and Revolutionizing Transportation (SMART) Grants</a>	\$500,000,000	Provides supplemental funding grants to rural, midsized, and large communities to conduct demonstration projects focused on advanced smart city or community technologies and systems in a variety of communities to improve transportation efficiency and safety.
<a href="#">Pilot Program for Transit Oriented Development</a>	\$68,864,631	Discretionary grant program that helps support the Federal Transit Administration's mission of improving public transportation for America's communities by providing funding to local communities to integrate land use and transportation planning with a new fixed guideway or core capacity transit capital investment.
<a href="#">National Electric Vehicle Infrastructure Formula Program</a>	\$5,000,000,000	Strategically deploy electric vehicle charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability. Sets aside 10% of funding for discretionary grants to State and local governments that require additional assistance to strategically deploy electric vehicle charging infrastructure.

<b>Federal Program</b>	<b>Amount</b>	<b>Description</b>
<a href="#"><u>Charging and Fueling Infrastructure Grants (Community Charging)</u></a>	\$1,250,000,000	Funds will be made available each fiscal year for Community Grants, to install electric vehicle charging and alternative fuel in locations on public roads, schools, parks, and in publicly accessible parking facilities.
<a href="#"><u>Charging and Fueling Infrastructure Grants (Corridor Charging)</u></a>	\$1,250,000,000	Deploy electric vehicle charging and hydrogen/propane/natural gas fueling infrastructure along designated alternative fuel corridors and in communities.
<a href="#"><u>Electric Drive Vehicle Battery Recycling And 2nd Life Apps</u></a>	\$200,000,000	Expands an existing program at the Department of Energy for research, development, and demonstration of electric vehicle battery recycling and second-life applications for vehicle batteries.
<a href="#"><u>Commercial Motor Vehicle Operators Grant Program</u></a>	\$16,500,000	Awards grants to a variety of educational institutions that provide commercial truck and bus driving training, including accredited public or private colleges, universities, vocational technical schools, post-secondary educational institutions, truck driver training schools, associations, and State and local governments, including federally recognized Tribal governments.
<a href="#"><u>Low or No Emission (Bus) Grants</u></a>	\$5,624,550,890	Provides capital funding to replace, rehabilitate, purchase, or lease buses and bus-related equipment and to rehabilitate, purchase, construct, or lease bus-related facilities. Provides capital funding for low or no emissions bus projects.
<a href="#"><u>Building Resilient Infrastructure and Communities (Robert T Stafford Act Section 203(i))</u></a>	\$1,000,000,000	Federal Emergency Management Agency will provide financial assistance to eligible Building Resilient Infrastructure and Communities applicants for the following activities: capability and capacity-building activities; mitigation projects; and management costs.
<a href="#"><u>Clean Vehicle Credit</u></a>	\$7,541,000,000	Provides a tax credit for purchasers of clean vehicles. The tax credit is not available for consumers who have adjusted gross incomes for the current or preceding year above \$300,000 (couples), \$225,000 (heads of household), \$150,000 (singles). Not inflation adjusted.
<a href="#"><u>Commercial Clean Vehicles Credit</u></a>	\$3,583,000,000	Provides a tax credit for purchasers of qualified commercial clean vehicles. Businesses that acquire motor vehicles or mobile machinery for use or lease; tax-exempt entities that acquire them for use
<a href="#"><u>Alternative Fuel Vehicle Refueling Property Credit</u></a>	\$1,738,000,000	Provides a tax credit for alternative fuel vehicle refueling and charging property in low-income and rural areas. Alternative fuels include electricity, ethanol, natural gas, hydrogen, biodiesel, and others. 6% of the cost for businesses, limited to a \$100,000 credit per item of property for businesses. 30% for individuals, limited to \$1,000.
<a href="#"><u>Credit for Previously Owned Clean Vehicles</u></a>	\$1,347,000,000	Provides a tax credit for purchasers of preowned clean vehicles. Tax credit is not available for consumers who have adjusted gross incomes for the current or preceding year above \$150,000 (couples), \$112,500 (heads of household), \$75,000 (singles). Individuals can claim only once per three years. Vehicles must be sold by a dealer; the sale price must be \$25,000 or less; and it can only be claimed once per vehicle.
<a href="#"><u>Clean Heavy-Duty Vehicle Program</u></a>	\$1,000,000,000	Provides funds to offset the costs of replacing heavy-duty Class 6 and 7 commercial vehicles
<a href="#"><u>Neighborhood Access and Equity Grant Program</u></a>	\$3,205,000,000	Awards competitive grants for context-sensitive projects that improve walkability and safety and provide affordable transportation access; to mitigate or remediate negative impacts on the human or natural environment in disadvantaged communities from a surface transportation facility; and for planning and capacity building activities in disadvantaged or underserved communities.
<a href="#"><u>Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT)</u></a>	\$8,400,000,000	Provides funding to help make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk costal infrastructure. The program consists of a formula program and a discretionary grant program.
<b>Building Sector</b>		
<a href="#"><u>Low Income Home Energy Assistance Program</u></a>	\$500,000,000	Assists eligible low-income households with their heating and cooling energy costs, bill payment assistance, energy crisis assistance, weatherization and energy-related home repairs.

<b>Federal Program</b>	<b>Amount</b>	<b>Description</b>
<a href="#"><u>Weatherization Assistance Program</u></a>	\$3,500,000,000	Increases the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, the handicapped, and children.
<a href="#"><u>Grants for Energy Efficiency and Renewable Energy Improvements at Public School Facilities</u></a>	\$500,000,000	Provides competitive grants to make energy efficiency, renewable energy, and alternative fueled vehicle upgrades and improvements at public schools.
<a href="#"><u>Cost-effective Codes Implementation for Efficiency and Resilience</u></a>	\$225,000,000	Competitive grant program to enable sustained, cost-effective implementation of updated building energy codes to save customers money on their energy bills.
<a href="#"><u>Energy Efficiency Materials Pilot Program</u></a>	\$50,000,000	Provides nonprofits with energy efficiency materials including roof or lighting systems; windows, and doors, including a security; heating, ventilation, or air conditioning system or component of the system (including insulation and wiring and plumbing improvements needed to serve a more efficient system).
<a href="#"><u>Career Skills Training</u></a>	\$10,000,000	Provides grants to pay the federal share of career skills training programs under which students concurrently receive classroom instruction and on-the job training for the purpose of obtaining an industry-related certification to install energy efficient building technologies
<a href="#"><u>Building, Training, And Assessment Centers</u></a>	\$10,000,000	Provides grants to institutions of higher education to establish building training and assessment centers to educate and train building technicians and engineers on implementing modern building technologies.
<a href="#"><u>Energy Auditor Training Grant Program</u></a>	\$40,000,000	Provides grants to eligible States to train individuals to conduct energy audits or surveys of commercial and residential buildings to build the clean energy workforce, save customers money on their energy bills, and reduce pollution from building energy use.
<a href="#"><u>Brownfields Projects</u></a>	\$1,200,000,000	The Environmental Protection Agency's program provides funds to empower States, communities, Tribes, and nonprofit organizations to prevent, inventory, assess, clean up, and reuse brownfield sites.
<a href="#"><u>Drinking Water State Revolving Fund</u></a>	\$11,713,000,000	States initially receive funding, then provide funds to Water Utilities and/or Municipal and other Eligible Entities. Tribes and Territories are also eligible to receive a portion of State Revolving Fund funds.
<a href="#"><u>Water Infrastructure Improvements for the Nation, Small and Underserved Communities Emerging Contaminants Grant Program</u></a>	\$5,000,000,000	States initially receive funding, then provide funds through grants to water utilities and other eligible entities in small and/or underserved/disadvantaged communities. Tribes and territories are also eligible to receive funds under this program.
<a href="#"><u>Methane Emissions Reduction Program</u></a>	\$1,550,000,000	Provides financial and technical assistance to accelerate the reduction of methane and other greenhouse gas emissions from petroleum and natural gas systems. The statute also establishes a waste emissions charge for applicable facilities that report more than 25,000 metric tons of CO2 equivalent per year (to the petroleum and natural gas systems source category of the Greenhouse Gas Reporting Program) and that exceed statutorily specified waste emissions thresholds.
<a href="#"><u>Environmental and Climate Justice Block Grants</u></a>	\$3,000,000,000	Provides grants and technical assistance to community-based organizations, alone or in partnerships, to reduce indoor and outdoor air pollution, including greenhouse gases; monitor for pollution; improve community resilience to the impacts of climate change, including extreme heat and wildfire; and build the capacity of these organizations to engage with state and federal decision-making processes.
<a href="#"><u>Funding to Address Air Pollution at Schools</u></a>	\$50,000,000	Provides funds for grants and other activities to monitor and reduce pollution and greenhouse gas emissions at schools in low-income and disadvantaged communities. To provide technical assistance to schools in low-income and disadvantaged communities to develop school air and environmental quality plans and to identify and mitigate ongoing air pollution hazards.

<b>Federal Program</b>	<b>Amount</b>	<b>Description</b>
<a href="#">Energy Efficiency Home Improvement Credit</a>	\$12,451,000,000	Provides a tax credit for energy-efficiency improvements of residential homes.
<a href="#">Residential Clean Energy Credit</a>	\$22,022,000,000	Provides a tax credit for the purchase of residential clean energy equipment, including battery storage with capacity of at least 3 kWh. 30% of cost of equipment through 2032; 26% in 2033; 22% in 2034.
<a href="#">New Energy Efficient Homes Credit</a>	\$2,043,000,000	Provides a tax credit for construction of new energy efficient homes. \$2,500 for new homes meeting Energy Star standards; \$5,000 for certified zero-energy ready homes. For multifamily, base amounts are \$500 per unit for Energy Star and \$1000 per unit for zero-energy ready.
<a href="#">High-Efficiency Electric Home Rebate Program</a>	\$4,500,000,000	Awards grants to state energy offices and Tribal entities to develop and implement a high efficiency electric home rebate program.
<a href="#">Home Energy Performance-Based, Whole-House Rebates</a>	\$4,300,000,000	Awards grants to state energy offices to develop a whole-house energy saving retrofits program that will provide rebates to homeowners and aggregators for whole house energy saving retrofits.
<a href="#">Green and Resilient Retrofit Program</a>	\$837,500,000	Provides grants and loans to HUD-assisted properties to improve energy or water efficiency; enhance indoor air quality or sustainability; implement the use of zero-emission electricity generation, low-emission building materials or processes, energy storage, or building electrification strategies; or make the properties more resilient to climate impacts. The law provides up to \$4,000,000,000 in loan authority.
<a href="#">Energy Efficient Commercial Buildings Deduction</a>	\$362,000,000	Provides a tax deduction for energy efficiency improvements to commercial buildings, such as improvements to interior lighting; heating, cooling, ventilation, and hot water; and building envelope.
<a href="#">Improving Energy Efficiency or Water Efficiency or Climate Resilience of Affordable Housing</a>	\$1,000,000,000	Provides grants and direct loans to fund projects that improve energy or water efficiency, enhance indoor air quality or sustainability, implement the use of zero-emission electricity generation, low-emission building materials or processes, energy storage, or building electrification strategies, or address climate resilience of an eligible property.
<a href="#">State-Based Home Efficiency Contractor Training Grants</a>	\$200,000,000	Provides financial assistance to states to develop and implement a program to provide training and education to contractors involved in the installation of home energy efficiency and electrification improvements, including improvements eligible for rebates under sections 50121(d) and 50122(d) of the Inflation Reduction Act.
<b>Workforce Development</b>		
<a href="#">Career Skills Training</a>	\$10,000,000	Provides grants to pay the federal share of career skills training programs under which students concurrently receive classroom instruction and on-the job training for the purpose of obtaining an industry-related certification to install energy efficient building technologies.
<a href="#">Energy Auditor Training Grant Program</a>	\$40,000,000	Provides grants to eligible States to train individuals to conduct energy audits or surveys of commercial and residential buildings to build the clean energy workforce, save customers money on their energy bills, and reduce pollution from building energy use.
<a href="#">Building, Training, And Assessment Centers</a>	\$10,000,000	Provides grants to institutions of higher education to establish building training and assessment centers to educate and train building technicians and engineers on implementing modern building technologies.
<a href="#">Manufacturing Leadership</a>	\$50,000,000	Provides funding to States to provide assistance to small and medium manufacturers to invest in smart manufacturing technologies or access high performance computing resources for manufacturing analysis.
<a href="#">Building Resilient Infrastructure and Communities (Robert T Stafford Act Section 203(i))</a>	\$1,000,000,000	Capability and Capacity-Building – Activities, enhances the knowledge, skills, expertise, etc., of the current workforce to expand or improve the administration of mitigation assistance. This includes activities in the following subcategories: building codes activities, partnerships, project scoping, mitigation planning and planning-related activities, and other activities
<a href="#">State-Based Home Efficiency Contractor Training Grants</a>	\$200,000,000	Provides financial assistance to states to develop and implement a program to provide training and education to contractors involved in the installation of home energy efficiency and electrification improvements, including improvements eligible for rebates under sections 50121(d) and 50122(d) of the Inflation Reduction Act.

<b>Federal Program</b>	<b>Amount</b>	<b>Description</b>
<a href="#"><u>Clean Heavy-Duty Vehicles</u></a>	\$1,000,000,000	Provides funds to offset the costs of replacing heavy-duty Class 6 and 7 commercial vehicles with zero-emission vehicles; deploying infrastructure needed to charge, fuel, or maintain these zero-emission vehicles; and developing and training the necessary workforce.
<a href="#"><u>Environmental and Climate Justice Block Grants</u></a>	\$3,000,000,000	Provides grants and technical assistance to community-based organizations, alone or in partnerships, to reduce indoor and outdoor air pollution, including greenhouse gases; monitor or pollution; improve community resilience to the impacts of climate change, including extreme heat and wildfire; and build the capacity of these organizations to engage with state and federal decision-making processes.
<a href="#"><u>From Learning to Leading: Cultivating the Next Generation</u></a>	\$250,000,000	Enables 1890 institutions, 1994 institutions, Alaska Native-serving institutions and Native Hawaiian-serving institutions, Hispanic-serving institutions, and insular area institutions of higher education located in the U.S. territories to build and sustain the next generation of the food, agriculture, natural resources, and human sciences workforce including the future USDA workforce.
<a href="#"><u>Enhanced Use of Defense Production Act of 1950</u></a>	\$250,000,000	Section 30001 appropriates \$500 million to carry out the Defense Production Act (DPA). President Biden issued presidential determinations providing the Department of Energy (DOE) with the authority to use \$250,000,000 of the DPA funding to accelerate domestic production of key energy technologies. In November 2022, DOE announced a notice of intent and request for information on a proposed \$250 million DPA investment to accelerate domestic electric heat pump manufacturing.

