

**Applicant Organization:** Philadelphia Energy Authority (PEA)

**Primary Contact Name, Phone Number, Email Address:**

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**Type of Application:**

- ✓ Individual Application

**Funding Requested:** \$197,822,956.00

**Application Title:** Philadelphia Energy Authority - Southeast PA Climate Pollution Reduction Grants Program

**Brief Description of GHG Measures (1-2 sentences each):**

**Measure 1: Actions to Support Decarbonization of Government Operations** - To dramatically reduce greenhouse gas emissions across the 5-county region, this key strategy provides incentives for the direct implementation of end-use energy efficiency, electrification, and clean energy measures in existing and newly constructed government-owned buildings and facilities. These projects include infrastructure upgrades for publicly accessible buildings like K-12 schools and colleges, libraries, community and activity centers, health centers, and senior service facilities, as well as critical municipal services buildings including police departments, fire departments, public works, and county offices.

**Measure 2: Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Residential Buildings** - The residential projects proposed in this application propose measurable and scalable solutions to reduce GHG emissions and improve affordability for owners and renters in single-, multi-family, and communal living residences. PEA's slate of residential projects also include scalable, replicable program models to address challenges with residential clean energy programs that reflect the feedback received from LIDAC communities in this process and over many years of robust stakeholder engagement.

**Measure 3: Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Commercial Buildings** - By making direct energy efficiency, electrification, and clean energy investments in critical community-serving facilities located in LIDAC communities, CPRG will deliver direct quality of life benefits like lowered CAP and HAP as well as long-term utility savings that can be better invested in the mission of these organizations. In addition to project support, this proposal also contemplates commercial programs to help scale clean energy in the region to overcome specific financial barriers.

**Measure 4: Actions to Transition Light Duty Vehicles to Low- or No-Carbon Emission Vehicles** - PEA's slate of EV projects involve supporting EV adoption both on a municipal level and in well-trafficked coordinators in the region. These projects provide an opportunity for government and quasi-governmental entities to lead by example to demonstrate strategies for intentionally electrifying fleets by scaling infrastructure and fleet vehicles in tandem and, where possible, leveraging publicly-accessible spaces to deliver more charging opportunities to the broader public.

**Sector(s):**

- ✓ Electric Power
- ✓ Transportation
- ✓ Commercial and Residential Buildings
- ✓ Waste and Materials Management

**Expected Total Cumulative GHG Emission Reductions for 2025-2030:** 213,641.4

**Expected Total Cumulative GHG Emission Reductions for 2025-2050:** 938,076.3

**Location(s) with City and State:**

Philadelphia County

- Philadelphia, PA

Bucks County

- Doylestown, PA
- Levittown, PA
- Morrisville, PA

Delaware County

- Havertown, PA
- Darby, PA
- Media, PA
- Radnor, PA
- Wayne, PA
- Thornton, PA

Montgomery County

- Ardmore, PA
- Fort Washington, PA
- Bryn Mawr, PA
- Wynnewood, PA
- Bala Cynwyd, PA

Chester County

- West Chester, PA
- Chester Springs, PA
- Exton, PA
- Coatesville, PA
- Phoenixville, PA

**PCAP Lead Organization:** Delaware Valley Regional Planning Commission

**PCAP Title:** Climate Action Plan - Philadelphia MSA

**PCAP Website Link:** <http://www.dvrpc.org/cprg>

**List of GHG Emission Reduction Measures with Page Numbers:**

- Measure 1. Actions to Support Decarbonization of Local Government Operations (Page 30)
- Measure 2. Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Residential Buildings (Page 37)
- Measure 3. Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Commercial Buildings (Page 45)
- Measure 4. Actions to Transition Light Duty Vehicles to Low- or No-Carbon Emission Vehicles (Page 52)
- Measure 5. Actions to Expand and Improve Transit (Page 58)
- Measure 6. Actions to Implement Bicycle, Pedestrian and Active Transportation Improvements (Page 64)
- Measure 7. Actions to Implement a Clean Electricity Grid and Ensure Grid Reliability (Page 70)
- Measure 8. Actions to Reduce Solid Waste and Better Manage Waste Generated (Page 76)
- Measure 9. Actions to Reduce Emissions at Wastewater Treatment Plants and to Increase Generation of Biomethane (Page 82)

**Full List of Projects**

Subrecipient	County	Project Description
<b>Measure 1: Actions to Support Decarbonization of Local Government Operations</b>		
Bucks County	Bucks	<ul style="list-style-type: none"><li>● <b>(ID #1)</b> Bucks County will install a 485 kW solar array to generate and provide clean energy to its Government Building and four new Level 2 EV</li></ul>

		<p>chargers.</p> <ul style="list-style-type: none"> <li>● <b>(ID #2)</b> Bucks County will install a 102 kW solar array to generate and provide clean energy to its Fire Safety and Training Facility.</li> </ul>
Chester County	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #3)</b> Chester County will develop and construct an all electric bus depot for the county's community transit service, which will include a 627 kW solar array combined with 30 kW of battery storage to support future bus electrification.</li> </ul>
West Chester University	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #4)</b> West Chester University will install of a new geothermal system and well field to provide heating and cooling for the new 175,000 square foot Sturzebecker Health Science Center</li> </ul>
West Goshen Township	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #5)</b> West Goshen Township will install a 267 kW solar array to generate and provide clean energy to the West Goshen Township Public Works Building.</li> </ul>
West Vincent Township	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #6)</b> West Vincent Township will upgrade HVAC and install a 65 kW solar array and battery backup at its Public Works Building and its Opalanie Park maintenance facility.</li> </ul>
West Chester Borough	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #7)</b> West Chester Borough will install 16 Level 2 EV charging plugs, powered by a 68 kW charging canopy, to power the Borough's municipal fleet and public users.</li> </ul>
Delaware County	Delaware	<ul style="list-style-type: none"> <li>● <b>(ID #8)</b> Delaware County will plan, design, and construct a commercial-grade composting facility that will utilize processes to improve air quality.</li> <li>● <b>(ID #9)</b> Delaware County will perform LED lighting retrofits and submetering at its Fair Acres Geriatric Facility and campus.</li> <li>● <b>(ID #10)</b> Delaware County will install submeters on its George W. Hill Correctional Facility campus, and will install LED lighting in the prison building and guard booth.</li> <li>● <b>(ID #11)</b> Delaware County will install 12 dual-port Level II electric vehicle chargers at its Fair Acres Campus to serve the county fleet.</li> </ul>
Haverford Township	Delaware	<ul style="list-style-type: none"> <li>● <b>(ID #12)</b> Haverford Township will install a 48 kW solar array to generate and provide clean energy to the Haverford Township Free Library.</li> <li>● <b>(ID #13)</b> Haverford Township will install a 85 kW solar canopy over the Police Department parking lot to generate and provide clean energy to the Haverford Township Police Department.</li> </ul>
William Penn School District	Delaware	<ul style="list-style-type: none"> <li>● <b>(ID #14)</b> William Penn School District will install a 777 kW solar farm and solar-ready roofing at Park Lane Elementary School.</li> </ul>
Radnor Township	Delaware	<ul style="list-style-type: none"> <li>● <b>(ID #15)</b> Radnor Township will install a 140 kW rooftop solar array, upgrade HVAC systems, and install LED lighting at its Municipal Building.</li> <li>● <b>(ID #16)</b> Radnor Township will install a 185 kW</li> </ul>

		<p>rooftop solar array, upgrade HVAC systems, and install LED lighting at its Public Works Building.</p> <ul style="list-style-type: none"> <li>● <b>(ID #17)</b> Radnor Township will install rooftop electrified heat pumps and LED lighting at the Radnor Activity Center.</li> </ul>
Lower Merion Township	Montgomery	<ul style="list-style-type: none"> <li>● <b>(ID #18)</b> Lower Merion Township will replace the roofs and install a total of 1.32 MW of solar at the Ludington Library, Penn Wynne, Ardmore Avenue Community Center, the Bala Cynwyd Library, the Ardmore Book Processing Center, the Township Administration Building and the Public Safety Building, and the Bala Gym.</li> </ul>
Merion Fire Company of Ardmore	Montgomery	<ul style="list-style-type: none"> <li>● <b>(ID #19)</b> The Merion Fire Company of Ardmore will install a 48kW solar array on the roof of its Ardmore Firehouse to generate and provide clean energy.</li> </ul>
Upper Dublin Township	Montgomery	<ul style="list-style-type: none"> <li>● <b>(ID #20)</b> Upper Dublin Township will turn its Civic and Public Services Facility into a net-zero building, with on-site solar production, geothermal energy, and an energy efficient envelope</li> </ul>
Delaware Valley Regional Planning Commission (DVRPC)	4-counties	<ul style="list-style-type: none"> <li>● <b>(ID #21)</b> The Delaware Valley Regional Planning Commission will hire a Shared Energy Manager to provide energy management services to municipalities in Southeast PA who do not have the technical expertise or staff bandwidth to manage municipal energy usage.</li> </ul>
School District of Philadelphia	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #22)</b> School District of Philadelphia will modernize 20 schools, providing a total of 3.39 MW of on-site solar PV for 9 schools, lighting and HVAC electrification/modernization in 3 schools, and LED upgrades in 8 schools.</li> </ul>
City of Philadelphia	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #23)</b> The City of Philadelphia will upgrade 100 Electric Vehicle Charging Stations to power its municipal fleet.</li> <li>● <b>(ID #24)</b> The City of Philadelphia will extend its energy efficiency work at 8 city Health Centers to add 882 kW of onsite solar power.</li> <li>● <b>(ID #25)</b> The City of Philadelphia will undertake renovations to double processing capacity at its Fairmount Park Organic Recycling Center and Compost Site, which process park organics waste and supplies compost to residents.</li> </ul>
Philadelphia Water Department	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #26)</b> The Philadelphia Water Department will upgrade and expand its solar array to 1,219 kW at its Southeast Water Pollution Control Plant.</li> <li>● <b>(ID #27)</b> PWD will install an automated biogas utilization valve to send 12,630 metric tons of biogas annually to the Biosolids Recycling Center onsite at the Water Department's Southwest Water Pollution Control Plant, in order to utilize biogas and reduce flaring and reliance on natural gas.</li> </ul>
Philadelphia Northeast	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #28)</b> Philadelphia Northeast Airport will install a</li> </ul>

Airport		2.01 MW on-site solar power array over its parking lot to serve all of the airport's electricity needs
Philadelphia Authority for Industrial Development (PAID)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #29)</b> PAID will procure 3-4 electric buses, install two electric bus charging stations, and upgrade power infrastructure at the Philadelphia Navy Yard.</li> <li>● <b>(ID #30)</b> PAID will install LED pedestrian streetlights at the Philadelphia Navy Yard.</li> </ul>
<b>Measure 2: Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Residential Buildings</b>		
Camphill Village Kimberton Hills	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #31)</b> Camphill Village Kimberton Hills is a 120-unit life-sharing community for adults with intellectual disabilities, will undertake a comprehensive clean energy transition, including installation of 284 kW of solar paired with 1.5 MW of battery storage</li> </ul>
Brandywine Realty Trust	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #32)</b> Brandywine Realty Trust will complete the adaptive reuse and conversion of an existing 13-story tower from commercial office use to 170 residential energy efficient multi-family units.</li> </ul>
Centennial Parkside Community Development Corporation (CPCDC)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #33)</b> Centennial Parkside Community Development Corporation will work with partners to provide energy efficiency upgrades to 10-50 existing building in West Philadelphia, as an extension of its award winning Buildings Upgrade Prize concept.</li> </ul>
Deep Sea-GP, LLC	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #34)</b> Deep Sea-GP, LLC will transform an existing 9-story building into Beacon of Hope, a mixed use energy efficient development project that will provide 30 units of veteran housing and support services to Kensington residents.</li> </ul>
Energy Coordinating Agency (ECA)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #35)</b> Energy Coordinating Agency will pilot a Heating Oil to Heat Pump Conversion program for approximately 600 single-family homes within low-income and disadvantaged communities (LIDAC) in the City of Philadelphia.</li> </ul>
Habitat for Humanity Philadelphia	Philadelphia	<ul style="list-style-type: none"> <li>● <b>#36)</b> Habitat for Humanity Philadelphia will construct up to 26 new affordable homeownership units for low- to median-income households, all of which will be EnergyStar certified and will include 125 kW of solar to reduce utility bills.</li> </ul>
Philadelphia Energy Authority (PEA)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #37)</b> PEA will expand its nationally-recognized Built to Last Program, which will restore and future-proof 4,000 additional low-income single-family homes citywide by adding solar, heat pumps, and other electrification measures.</li> </ul>
Pennrose	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #38)</b> Pennrose will Construct a 65-unit 100% affordable scattered-site development in Strawberry Mansion to support low-income families. The Energy Star certified site will include LED lighting, high efficiency HVAC and weatherization.</li> <li>● <b>(ID #39)</b> Pennrose will complete energy and infrastructure upgrades at Neumann North, a 67-unit public housing apartment complex serving low-</li> </ul>

		<p>income seniors in Fishtown.</p> <ul style="list-style-type: none"> <li>● <b>(ID #40)</b> Pennrose will construct Bartram Village Phase I, providing 64 energy efficient units to low-income residents of Kingsessing. Bartram I will meet Enterprise Green Communities and Net Zero Ready Standards.</li> <li>● <b>(ID #41)</b> Pennrose will construct Bartram Village Phase II, providing 90 energy efficient units and a community center to low-income residents of Kingsessing. Bartram II will meet Enterprise Green Communities and Net Zero Ready Standards.</li> </ul>
Philadelphia Gas Works (PGW)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #42)</b> PGW will use grant funds to expand the Enhanced LIME (Low Income Multi-family Efficiency) program, to fund energy saving measures in low-income residences that wouldn't otherwise be installed. It will treat 6 multi-family buildings annually over the first 3 years of the grant.</li> </ul>
Philadelphia Housing Authority (PHA)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #43)</b> Philadelphia Housing Authority will renovate a 101-unit 16-story affordable senior housing facility including LED lighting and conversion from gas to electric cooking.</li> <li>● <b>(ID #44)</b> Philadelphia Housing Authority will implement a mix of new construction and energy efficient upgrades at the 240-unit James W. Johnson affordable housing complex.</li> </ul>
Philadelphia Housing Development Corporation (PHDC)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #45)</b> Philadelphia Housing Development Corporation will add energy retrofits to gap financing for low-income housing tax credit (LIHTC) preservation applications and standalone affordable housing preservation financing.</li> </ul>
YouthBuild Philadelphia Charter School	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #46)</b> YouthBuild Philadelphia Charter School will transform a vacant property into a transitional housing facility for the House of WIN (Women in Transition). YouthBuild students will receive hands-on experience in energy efficient rehabilitation processes.</li> </ul>
<b>Measure 3: Actions to Implement Energy Efficiency, Electrification, and Clean Energy for Commercial Buildings</b>		
Philadelphia Energy Authority (PEA)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #47)</b> PEA's Small Food Business Program will finance preventive maintenance/repairs on refrigeration equipment for 750 small food businesses</li> </ul>
Philadelphia Green Capital Corporation (PGCC)	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #48)</b> The Philadelphia Green Capital Corporation (PGCC) will provide \$1/watt grants to commercial and industrial solar installations, including nonprofit organizations, in Southeast PA.</li> </ul>
BTM Solutions, LLC.	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #49)</b> BTM Solutions, LLC will install a 933 kW solar array at the Philadelphia Business and Technology Center as a behind-the-meter pilot site to utilize a 233 kW Renewable Battery Energy Storage System (BESS) for individual buildings with</li> </ul>

		energy demands below 1 megawatt.
Philadelphia Youth Basketball, Inc.	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #50)</b> Philadelphia Youth Basketball Inc. will install a 287 kW Rooftop solar array designed to cover electricity needs of the newly opened Alan Horowitz "Sixth Man" Center.</li> </ul>
Mosaic Development Partners	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #51)</b> Mosaic Development Partners, in partnership with Called to Serve Community Development Corporation will transform the Zion Baptist Church Annex into the Reverend Leon H. Sullivan Community Impact Center, and will include clean energy generation and LEED Silver Certification.</li> </ul>
Share Food Program	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #52)</b> Share Food Program will upgrade its warehouse facility by installing a 427 kW solar array, and converting the facility to electric power with VRF technology.</li> </ul>
Solar States	Philadelphia	<ul style="list-style-type: none"> <li>● <b>(ID #53)</b> Solar States will install a 32 kW rooftop solar array, indoor garden solar array, and battery storage system at the Overbrook Environmental Education Center.</li> </ul>
<b>Measure 4: Actions to Transition Light Duty Vehicles to Low or No Carbon Emission Vehicles</b>		
Montgomery County	Montgomery	<ul style="list-style-type: none"> <li>● <b>(ID #54)</b> Montgomery County will design and implement 12 public Level 2 electric vehicle charging stations at county-owned or leased sites to ease the transition to electric vehicles.</li> </ul>
TerraSol Energies, Inc.	Chester	<ul style="list-style-type: none"> <li>● <b>(ID #55)</b> TerraSol Energies will install a 680 kW ground-mount solar array and battery storage to power 4 150kW National Electric Vehicle Infrastructure (NEVI) Direct Current Fast Charging (DCFC) stations in Exton, PA.</li> <li>● <b>(ID #56)</b> TerraSol Energies will install a 680 kW ground-mount solar array and battery storage to power 4 150kW National Electric Vehicle Infrastructure (NEVI) Direct Current Fast Charging (DCFC) stations in Coatesville, PA.</li> </ul>