

Building Community Resilience through Greenhouse Gas Emission Reductions Climate Pollution Reduction Grants – Implementation Grants General Competition Workplan

1. OVERALL PROJECT SUMMARY AND APPROACH

a. Description of GHG Reduction Measures

The overarching goal of this application is to help build community resilience through greenhouse gas (GHG) emission reductions while delivering benefits to disadvantaged communities in furtherance of the goals of the Justice40 Initiative and New York State’s Climate Leadership and Community Protection Act (Climate Act). This includes addressing key sources of GHG emissions from facilities that serve communities, such as facilities that support food security, heat resiliency, and offer other critical public services. The selection of measures described in this application include addressing specific gaps in federal and State funding for disadvantaged communities and local governments, two core stakeholder groups often challenged by lack of available resources to invest in climate. The measures are intended to improve upon existing State programs, which often address climate change mitigation or climate resilience, but not both, or focus on a single emission source or sector. Instead of limiting focus to one sector or strategy, this application seeks to maximize benefits to communities by simultaneously reducing GHG and co-pollutant emissions while enhancing resilience to climate change and addressing multiple types of GHG emission sources at once. Each measure described in this application aligns with the Climate Pollution Reduction Grants (CPRG) Program Priority Climate Action Plan (PCAP) for New York State. Additionally, each of these measures supports the U.S. Environmental Protection Agency (EPA) Fiscal Year (FY) 2022-2026 Strategic Plan Goal 1 “Tackle the Climate Crisis” Objective 1.1, “Reduce Emissions that Cause Climate Change.”

There are four individual measures described in this application that complement one another and were strategically selected to be implemented together to maximize benefits to New Yorkers, particularly New Yorkers who live and work in low-income and disadvantaged communities (LIDAC). The four measures listed below are described in more detail throughout the application:

- 1) Support organics recycling and food waste diversion;
- 2) Phase out hydrofluorocarbons and support natural refrigerants;
- 3) Create green community cooling and heating centers; and
- 4) Support advanced energy performance contracting for local governments.

The key sources of emissions addressed in this application are those associated with community resiliency services and emissions associated with the buildings and waste sectors. These are also among the largest sources of GHG emissions in New York State, and therefore highlighted as priorities in the CPRG Program PCAP for New York State. These two sectors are also the largest sources of short-lived climate pollutants, methane (CH₄), and hydrofluorocarbons (HFCs). The measures in this application would not only reduce those emissions but also stimulate the growth and adoption of future-proof technologies.

The New York State Department of Environmental Conservation (NYSDEC) seeks to partner with the New York State Energy Research and Development Authority (NYSERDA) to implement the four GHG reduction measures in this application.

Measure 1: Support Organics Recycling

In 2023, 17.9 million tons of municipal solid waste was generated in New York State. Of that amount, 17.65% was food scraps, equaling 3.2 million tons. Of the 3.2 million tons of food scraps, only an estimated 2.83% was diverted from disposal. Unfortunately, 97% of the food scraps generated in New York State are not diverted and continue to be disposed, mostly by being landfilled. There is a significant need and opportunity to increase food scraps diversion, reduce the landfilling of organic waste, and realize the associated benefits. This includes avoided CH₄ emissions from landfills and an increased opportunity to bolster food security in communities statewide through donations of wholesome excess food. The diversion of food scraps from disposal is consistent with the recently released Wasted Food Scale issued by EPA and EPA's policies and publications that strongly support food waste diversion and outline the positive climate impacts from a reduction in landfilling of these materials. NYSDEC also recognizes the partnership between EPA, the U.S. Department of Agriculture (USDA), and the U.S. Food and Drug Administration that outlines strategies to move toward a more circular economy.¹ Efforts to increase food waste recycling infrastructure is a key strategy to support the national strategy and is also consistent with New York State's goals and policies.²

Landfilling in New York State is relatively easy, which makes organics recycling less attractive to the private and municipal sectors. NYSDEC currently implements several strategies to prioritize wasted food reduction, food donation, and food scraps recycling programs and initiatives in the commercial, industrial, agricultural, and institutional sectors. NYSDEC's ongoing and future initiatives aim to support the continued development of the organics recycling industry in New York State and empower residents to properly manage excess food, reduce wasted food, and recycle their food scraps. This measure would support those efforts by providing funding to grow the infrastructure to recycle food scraps through composting or other acceptable organics recycling methods.

NYSDEC regulates approximately 60 composting facilities to compost food scraps, approximately one-third of which are operated by a municipality; the remaining two-thirds are privately owned and operated. Additionally, there is a larger group of municipalities and nonprofit organizations that operate food scraps drop-off and curbside collection programs to recycle food scraps at a nearby composting operation. Through NYSDEC's existing grant program structure, CPRG funds would be used to provide 20 grants by mid-2026 to local governments or nonprofits and another 20 grants by the end of 2030. NYSDEC staff would administer the grant program, meaning more funding will reach the entities that will develop new or expanded organics recycling facilities. Projects may include starting or expanding a food scraps composting facility, expanding a yard trimmings composting facility to accept food scraps, starting a food scraps drop-off program, purchasing equipment to process food scraps, or purchasing equipment to transport food scraps. Traditionally, NYSDEC grant programs for organics recycling facilities have required a 25% cost share from the municipality or nonprofit organization; the same cost share would be used for this program. NYSDEC is prepared to act quickly to begin community engagement to design a successful program and release a Request for Applications (RFA) to kick-off the project selection. Since advancing the Justice40 Initiative and New York's disadvantaged communities mandate are central to these measures, as the program is developed, NYSDEC will determine, along with community partners, how best to ensure the program results in real benefits to disadvantaged communities. For example, food waste programs can support food security and food relief organizations by diverting excess wholesome food.

¹ Draft National Strategy for Reducing Food Loss and Waste and Recycling Organics, released on December 2, 2023.

² New York State goals and policies include recommendations found in the New York State Solid Waste Management Plan and the Climate Action Council Scoping Plan.

In addition, NYSDEC intends to establish synergy between the measures contained in this application. More specifically, NYSDEC seeks to explore ways to establish partnerships between potential project sponsors in different measures. For example, there may be opportunities for project sponsors that receive funds through the natural refrigerants measure (see *Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants*) to take greater action in diverting and/or donating food waste. Concurrently, existing New York State laws and regulations related to food donation and recycling³ inherently establish these synergies. As additional organics recycling infrastructure is established through this measure, more businesses and institutions are captured by existing laws and regulations.

Table 1 details tasks and milestones for implementation of the proposed measure to support organics recycling. The period of performance is October 2024 – October 2029. Table 2 details anticipated risks associated with measure implementation and mitigation strategies for each risk.

Table 1. Support Organics Recycling - Tasks and Milestones

| Task # | Task Description | Anticipated Milestone Dates | Assumptions |
|--------|--|-------------------------------|--|
| 1.1 | Community engagement to determine scope of organics recycling facility grants program | October 2024 – April 2025 | Use of NYSDEC resources (social media, direct engagement, etc.) to solicit input |
| 1.2 | Hire and train additional NYSDEC staff to manage organics reduction and recycling grants program | April 2025 | Leverage existing recruitment practices to obtain staff with required expertise |
| 1.3 | Preparation of RFA that outlines program details | May 2025 – July 2025 | RFA developed in compliance with fiscal requirements and in consideration of community input |
| 1.4 | Educate potential grantees on the details of the program | August 2025 – October 2025 | NYSDEC to develop guidance materials for applicants |
| 1.5 | Review grant applications, select projects, develop contracts for awardees | October 2025 – April 2026 | Determine if projects meet RFA criteria and develop contract documents |
| 1.6 | Prepare and release request for proposal (RFP) for contractor to track and report on program metrics | April 2026 – August 2026 | Contractor selected to follow awarded projects |
| 1.7 | Provide payments to grantees | August 2026 – end of projects | All payments are processed following fiscal requirements |
| 1.8 | Review program impacts and determine best practices / next steps to increase organics sustainability | August 2026 – end of projects | Review data on new quantities of food scraps diverted and evaluate areas for improvement |
| 1.9 | Projects complete | October 2029 | |

Table 2. Support Organics Recycling - Risks and Mitigation Strategies

| Risk | Effect on GHG emission reductions | Mitigation Strategy |
|----------------------------------|---|--|
| Delays in program administration | Delays may reduce cumulative GHG emission reductions in the near-term (2025 – 2030) | Use existing NYSDEC staff that currently administer grants to reduce potential obstacles |

³ The New York State Food Donation and Food Scraps Recycling law requires businesses and institutions outside of New York City that generate an annual average of two tons of wasted food per week or more to donate excess edible food and recycle all remaining food scraps if they are within 25 miles of an organics recycler.

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| Program undersubscribed in certain areas | GHG and co-pollutant emission reductions may not occur over same geographic scope as anticipated | Track applicant locations and target outreach to areas where the program is not receiving applications |
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Alignment with PCAP

The CPRG Program PCAP for New York State includes section 3.7 “Support Organics Recycling” (page 27) that details the importance of addressing organic waste in an effort to divert material from landfills. The measure will result in significant GHG emissions reductions, as shown in section 2.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

The New York State Climate Action Council Scoping Plan recommended a combination of regulatory and incentive measures to address food refrigeration facilities, the largest source of HFC emissions. As New York and the U.S. transition away from HFCs with high global warming potentials (GWPs), these facilities will need to replace current technologies with ultra-low or zero GWP alternatives. Natural alternatives, like carbon dioxide, are the optimal, future-proof choice for minimizing environmental impacts and are being increasingly adopted by U.S. supermarkets. Supporting the transition to natural refrigerants, specifically in commercial food stores and other food resiliency facilities in disadvantaged communities, will help ensure food security and reduce GHG emissions in the buildings sector, the largest source of emissions in New York. The federal American Innovation and Manufacturing (AIM) Act and related EPA regulations are phasing down HFC supplies to the U.S. and may require the use of reclaimed refrigerant in the servicing of such commercial food equipment. This measure seeks to support projects that go above and beyond federal or state regulations in an effort to incentivize truly future-proof technologies. This also directly aligns with EPA’s FY 2022-2026 Strategic Plan, Objective 1.1: Reduce Emissions that Cause Climate Change that prioritizes phasing down the “production and consumption of HFCs.”

There are currently no ultra-low or zero GWP refrigerant solutions that are “drop-in,” or that can be installed in existing equipment. The cost to transition from HFCs may be particularly challenging for small, independent businesses and nonprofits and those operating in disadvantaged communities, as they may lack the resources to transition their facilities, with the risk of retailers not prioritizing fresh food options in underserved areas. Food banks, food hubs, and small food stores such as bodegas or corner stores play a critical role in supporting food security and the implementation of this measure would enable their transition away from HFCs. Support for this transition is crucial for businesses and facilities disproportionately impacted by these costs. To implement this measure, NYSDEC would competitively procure a not-for-profit entity to administer a competitive grant program to install new full or partial refrigeration systems that contain natural refrigerants for retail food stores, food banks, and food hubs. In order to serve the goals of the Justice40 Initiative and New York’s disadvantaged communities mandate, only facilities located in disadvantaged communities would be eligible. Projects would be required to demonstrate financial need and a commitment to food security in the community. In addition, preference will be given to projects that can commit to hosting on-site workforce training and/or outreach events in the local community. NYSDEC would work with the program administrator to engage community stakeholders to design the program and ensure benefits are realized in disadvantaged communities. These benefits are discussed in section 4. The program would result in the installation of approximately 100 full or partial refrigeration systems that use natural refrigerants over five years. Projects would vary in size and scale, relative to the facility, and would receive on average an incentive of \$500,000 per project.

NYSDEC recently released, in partnership with effecterra, a report on the opportunities and barriers for the adoption of natural refrigerants in New York State.⁴ The technical working group that supported the report included experts in climate science and fluorinated gases, research and development for natural refrigerant technologies, industry, design and engineering, and safety standards; representatives of equipment end-users; environmental organizations; and New York State and New York City government officials. This measure is a natural progression of the findings of that report, building on existing planning and research, above and beyond the State’s PCAP.

Table 3 details tasks and milestones for implementation of the proposed natural refrigerant measure. The period of performance is October 2024 – October 2029. Table 4 details anticipated risks associated with measure implementation and mitigation strategies for each risk.

Table 3. Phase Out Hydrofluorocarbons - Tasks and Milestones

| Task # | Task Description | Anticipated Milestone Dates | Assumptions |
|---------------|--|------------------------------------|---|
| 2.1 | Prepare and release RFP to competitively procure third party administrator | October 2024 – February 2025 | Competitive procurement procedures are anticipated to take six months from receipt of award |
| 2.2 | Engage with communities to design program specifics | March 2025 – May 2025 | Engage with disadvantaged community and professional organizations; Completed in partnership with third party program administrator and current NYSDEC partners |
| 2.3 | Program administrator releases first round competitive procurement to solicit projects | May 2025 – June 2025 | Concurrent to Task 2.4 |
| 2.4 | Educate stakeholders and communities about program guidelines | May 2025 – August 2025 | Build upon earlier community engagement to target outreach and education to potential project sponsors that will best advance program goals |
| 2.5 | Procurement closes and program administrator reviews first round of applications, selects projects, and enters into agreements | August 2025 – November 2025 | Two months to evaluate and select successful applications and two months to enter into agreements with project sponsors |
| 2.6 | Program administrator releases second round competitive procurement to solicit projects | May 2027 – June 2027 | Second phase would address any potential shortcomings from first phase |
| 2.7 | Projects completed | October 2029 | |

Table 4. Phase Out Hydrofluorocarbons - Risks and Mitigation Strategies

| Risk | Effect on GHG emission reductions | Mitigation Strategy |
|-------------------------------|---|---|
| Delays in procurement process | Delays may reduce cumulative GHG emission reductions in the near-term (2025 – 2030) | Develop RFP documentation between announcement of award and receipt of assistance agreement to build in more time |
| Program undersubscribed | GHG emission reductions and co-benefits may not occur over the same geographic scope as anticipated | Track applicant locations and target outreach to areas where the program is not receiving applications |

⁴ effecterra. September 2023. Synthesis Report: New York State Assessment of Natural Refrigerants.

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| Supply chain constraints | A historically low demand for ultra-low and zero GWP options results in fewer options | Combine State regulatory and incentive programs to demonstrate demand |
| Workforce barriers | The availability of trained installers and servicers affects the adoption of new technologies | Coordinate technician training events at project sites to increase opportunities for the technician workforce to learn about natural refrigerant equipment and systems |
| Local building codes, particularly for high-pressure CO ₂ systems | State law fully enables any EPA-listed refrigerant, but inconsistent implementation of the State mechanical code at the local level may slow adoption of lower GHG emission systems | Ongoing engagement with code officials and consulting engineers; Support modular systems with charge sizes below current code limits (50 lbs.) |

Alignment with PCAP

The CPRG Program PCAP for New York State includes a GHG reduction measure, section 3.6 “Phase Out Hydrofluorocarbons and Support Natural Refrigerants,” (page 25) detailing the impacts of HFCs and the importance of phasing them down. This measure is key to meeting the goals of the CPRG program and will result in significant GHG emission reductions, as detailed in section 2. In addition to this measure’s alignment with New York’s PCAP, New York’s Climate Action Council Scoping Plan recommends a managed and just transition from reliance on HFC use, including through updated regulations; codes, and standards; investments in research and development; and education, training, and outreach.

Measure 3: Create Green Community Cooling/Heating Centers

Over the past year, New York State has experienced a variety of extreme weather events: Buffalo endured the longest non-mountaintop blizzard recorded in the U.S. and 40-year temperature records were broken on Long Island during a three-day heat wave. These patterns of extreme temperatures are anticipated to increase with climate change, including an increase in the number of heatwaves per year and potential changes in polar vortexes. Extreme temperatures disproportionately impact low-income and medically vulnerable communities such as the elderly or those who are burdened by energy costs.

New York State needs to both adapt to climate change and increased extreme temperatures predicted while simultaneously accelerating GHG emission reduction measures to mitigate the worst effects. NYSDEC will subaward funds to NYSEDA to create a Green Community Cooling/Heating Centers grant program to utilize emission reduction measures and technologies to strengthen community resiliency, specifically focusing on providing spaces for New Yorkers to go during extreme temperature events. Within this measure, NYSEDA will seek disadvantaged community stakeholder expertise and lived experience to inform program design. NYSEDA will prioritize facilities selected for upgrades based on whether disadvantaged community members currently use or have expressed sufficient interest in using them in the event of extreme temperatures, as well as facilities that are accessible to people with disabilities and those without a personal vehicle.

This program provides engineering, training, and grant support for neighborhood-level community facility upgrades located in and serving disadvantaged communities. Focusing on facilities that serve disadvantaged communities is aligned with the Justice40 Initiative and New York’s disadvantaged communities mandate. This may include funding for weatherization retrofits, installation of efficient heating and cooling systems, low GWP refrigerants and refrigerant leak management, or passive house design strategies. These measures will improve the energy efficiency of cooling/heating centers which may reduce operating costs. In addition, it will ensure that heating, ventilation, and air conditioning (HVAC) technologies installed are as low-emission and efficient as possible. To effectuate these critical

public health protection facilities, NYSERDA will seek project installations that reduce refrigerant emissions and, where commercially available and feasible, seek to utilize equipment that contains a refrigerant with a GWP of less than 10.

The program will consist of 2 phases:

- 1) Phase 1 would consist of engineering/design services to evaluate a facility for GHG emissions measures that improve cooling/heating center operations, for use in developing procurements for construction services.
- 2) Phase 2 would consist of grants to a subset of facilities that performed engineering studies through Phase 1, or an equivalent study completed independently to implement the most impactful projects. Criteria for selection may include highest and most cost-effective GHG emissions reduced, highest number of disadvantaged community members served, demonstrated use and support by disadvantaged communities, accessibility, vulnerability to climate hazards, and operational readiness.

This two-phased approach will ensure that projects that receive grant funding are most likely to be viable, and not result in canceled projects due to unexpected remediation costs, or other challenges that impede a timely and cost-effective retrofit. Those receiving studies but not proceeding to implementation grants may still use the studies to apply for other funding opportunities. This program would be open to local governments and community-based organizations (CBOs), with engineering services and grants awarded on a competitive basis designed to prioritize establishment of centers in disadvantaged communities. Applicants will be encouraged to demonstrate and leverage relationships between municipal and community-based and community-serving partners, as well as include plans to develop longer-term service agreements or other mechanisms to support facility operations beyond the implementation grant period. Program participants and their stakeholders would also receive thermal resiliency training to ensure that the emissions reductions measures have the most resiliency co-benefits. Phase 1 will result in approximately 18 studies on community facilities across the state and 10 facilities implementing emission reduction measures identified in the studies. In addition, and as discussed in the introduction to this application, NYSERDA intends to establish synergy between the measures contained in this application. For example, as described above, HVAC projects will use ultra-low or zero GWP refrigerants wherever feasible in line with *Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants*.

Table 5 details tasks and milestones for implementation of the proposed measure. The period of performance is October 2024 – October 2029. Table 6 details anticipated risks associated with measure implementation and mitigation strategies for each risk.

Table 5. Green Community Cooling/Heating Centers - Tasks and Milestones

| Task # | Task Description | Anticipated Milestone Dates | Assumptions |
|--------|--|------------------------------|--|
| 3.1 | Release solicitation for support contractor(s), municipalities, and CBOs | October 2024 | Solicitation developed upon award notification |
| 3.2 | Contract with support contractor(s) | February 2025 | |
| 3.3 | Conduct community engagement to seek input on facility types and siting of facilities in disadvantaged communities | October 2024 – February 2025 | |
| 3.4 | Contracts with municipalities and CBOs executed | April 2025 | |

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| 3.5 | Phase 1 studies complete | September 2025 | |
| 3.6 | Phase 2 awardees selected | Jan 2026 | Subset of round 1 projects move to round 2 |
| 3.7 | Phase 2 awardees release solicitations for construction | March 2026 | |
| 3.8 | Phase 2 awardees select construction firms; Construction starts | September 2026 | |
| 3.9 | Construction complete | Sept 2028 | Estimated up to 2 years for construction |
| 3.10 | Evaluation for final report complete | Sept 2029 | |

Table 6. Green Community Cooling/Heating Centers - Risks and Mitigation Strategies

| Risk | Effect on GHG emission reductions | Mitigation Strategy |
|---|---|--|
| Delays in program administrator procurement process | Delays may reduce GHG emission reductions in the near-term (2025 – 2030) | Develop solicitation between announcements of awardees and receipt of assistance agreement to build in more time |
| Delays in construction timelines due to supply chain or other issues | | Ensure Phase 1 studies identify most likely construction timeline risks, such as remediation |
| Delays from continuity of operations during construction | | Ensure Phase 1 studies identify operational needs |
| Costs increase due to inflation, supply chain disruptions, availability, and prices of domestic content | May result in fewer projects implemented, and therefore lower GHG emission reductions | Reduce the number of awards to ensure projects can move forward |

Alignment with PCAP

The CPRG Program PCAP for New York State section 3.5 “Create Resilient and Green Public Facilities” (page 23) details the importance of addressing energy use and resiliency in public/community buildings. This proposal measure corresponds to a portion of that PCAP measure. The measure will result in significant GHG emissions reductions, as shown in section 2. In addition, local governments engaged in deep retrofits such as passive house envelope upgrades may also be recruited to and from the Advanced Energy Performance Contracting measure, ensuring not only that individual community facilities receive efficient and resilient upgrades, but municipal portfolios as a whole do as well, including other building types not addressed in this measure.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

Energy Performance Contracts (EPCs) are a growing market that allow property owners to finance energy work off balance sheet and guarantee cost savings over time. NYSDEC will subaward funds to NYSERDA to innovate on this tested model by training municipalities, providing technical assistance through the design and contracting efforts, reducing risk and predevelopment costs associated with deep decarbonization and electrification, and providing an innovation fund to reduce financial risks associated with EPCs for harder-to-finance buildings and measures, such as historic buildings or beneficial electrification. While EPCs are used today, there are barriers to scale and impact among New York’s municipalities. First, many municipalities lack the required expertise to procure, evaluate, and manage an EPC that is beneficial to their community and meets local needs. Secondly, many municipalities have lengthy procurement processes, which can impose significant delays in project design and completion. Third, municipalities may lack funding for some of the up-front predevelopment

costs that would allow them to get the best and most accurate bids from energy service companies (ESCOs). Fourth, some municipalities may have too few or too small buildings to enter into an EPC on their own. Finally, ESCOs in the EPC market tend to avoid more complex construction scopes, as they have the potential to negatively impact project economics. More difficult projects include electrification of HVAC systems or historic buildings that are very common in New York’s municipal building stock or require costly but necessary remediation or health and safety upgrades.

The program will consist of up to three rounds of support, with each round consisting of 3 phases:

- 1) Phase 1: Predevelopment and procurement support.
This level of support will be available to any municipality that submits a satisfactory application. Services in this phase will consist of utility bill analysis, systems inventories, project scoping, procurement support, access to templates and educational materials, and owners’ representative services. Municipalities will not receive direct incentives in this phase, and instead will receive a certain amount of technical assistance from engineering technical assistance providers procured by NYSERDA.
- 2) Phase 2: Engineering studies.
NYSERDA will provide grants to municipalities to secure detailed design and engineering support for their projects that evaluates opportunities for deep energy retrofits, electrification, addressing historic building considerations, and performing asbestos and lead testing. These grants will be prioritized for disadvantaged communities that have engaged in Phase 1.
- 3) Phase 3: Innovation fund.
NYSERDA will provide incentives to address complex scope that may prevent a project from being financeable via a standard EPC. These grants will be prioritized for disadvantaged communities that have completed Phase 2.

While disadvantaged communities are prioritized, per the Justice40 Initiative and New York’s disadvantaged communities mandate, all communities would receive access to marketing and EPC procurement and predevelopment template materials for use by local governments, as well as access to prequalified lenders and ESCOs that meet certain criteria, such as measurement and verification (M&V) requirements. In addition, NYSERDA and its contractor(s) would help coordinate aggregated bids across municipalities. Such aggregation can achieve economies of scale and enable the inclusion of smaller buildings which would not independently be able to pursue an EPC. In addition, and as discussed in the introduction to this application, NYSERDA intends to establish synergy between the measures contained in this application. For example, local governments engaged in *Measure 3: Create Green Community Cooling/Heating Centers* may also be recruited to or from this measure, ensuring that municipalities consider cost-effective retrofits alongside community resiliency services.

Table 7 details tasks and milestones for implementation of the proposed measure. The period of performance is October 2024 – October 2029. Table 8 details anticipated risks associated with measure implementation and mitigation strategies for each risk.

Table 7. Support Advanced EPCs - Tasks and Milestones

| Task # | Task Description | Anticipated Milestone Dates | Assumptions |
|--------|---|-----------------------------|-------------|
| 4.1 | Release procurements for qualified lenders and/or ESCO and TA provider(s) | November 2024 | |
| 4.2 | NYSERDA contracts with lenders/ESCOs/TA providers | February 2025 | |

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|------|---|--------------|---|
| 4.3 | Application for TA released to municipalities | March 2025 | |
| 4.4 | Round 1 municipalities in contract with NYSERDA | May 2025 | TA providers perform Round 1, Phase 1 studies in 5 months |
| 4.5 | Round 1 municipalities issue RFPs | Sept 2025 | RFPs based on Phase 1 study results |
| 4.6 | Round 1 municipalities contracts with ESCOs executed | Mar 2026 | 6 months to receive and review bids, enter into contracts |
| 4.7 | Model documents finalized | May 2026 | Informed by best practices & round 1 |
| 4.8 | Round 2 municipalities in contract with NYSERDA | May 2026 | TA providers perform Round 2, Phase 1 studies in 5 months |
| 4.9 | Round 2 municipalities issues RFP | Sept 2026 | RFPs based on Phase 1 study results |
| 4.10 | Round 2 municipalities contracts with ESCOs executed | Mar 2027 | |
| 4.11 | Round 1 projects construction complete | April 2027 | 1 year from ESCO contract |
| 4.12 | Round 3 municipalities in contract with NYSERDA | May 2027 | Round 3 will only take place if funding isn't fully awarded in rounds 1 and 2 |
| 4.13 | Round 3 municipalities issue RFPs | Sept 2027 | RFPs based on Phase 1 study results |
| 4.14 | Round 3 municipalities contracts with ESCOs executed | Mar 2028 | |
| 4.15 | Round 2 projects construction complete, round 1 M&V complete | April 2028 | 1 year of energy usage for M&V |
| 4.16 | Round 3 projects construction completed, round 2 M&V complete | April 2029 | |
| 4.17 | Final report | October 2029 | |

Table 8. Support Advanced EPCs - Risks and Mitigation Strategies

| Risk | Effect on GHG emission reductions | Mitigation Strategy |
|---|--|--|
| Supply chain and inflation disruptions limit ability to offer EPCs with good terms or on-time project completions | Delays or fewer financeable projects to realize emissions reductions | Adjust EPC scopes as needed |
| Lack of interest from local governments in participating | Fewer GHG and co-pollutant emission-reducing project realized | Leverage existing outreach networks to market program to local governments; adjust program rules between solicitation rounds |
| Need for continued building use impacts construction schedule | Delays in realizing GHG and co-pollutant emission reductions | Technical assistance providers can identify operational needs in advance of procurement to mitigate delays |

Alignment with PCAP

The CPRG Program PCAP for New York State includes section 3.5 “Create Resilient and Green Public Facilities” (page 23), which details the importance of scaling up the impacts of energy performance contracting. This proposal measure corresponds to a portion of that PCAP measure. The measure will result in significant GHG emissions reductions, as shown in section 2.

b. Demonstration of Funding Need

CPRG implementation funding is necessary to fully implement the proposed measures. In some cases, there is limited existing funding to support these measures (e.g., existing programming to support food waste diversion), but the need outweighs available funds and CPRG funds are critical in order to realize

transformational change. Entities in New York State would not be eligible to apply for funding opportunities under these measures if they are awarded through the CPRG program for the same scope of work. The following subsection details the federal and non-federal funding sources that NYSDEC and NYSERDA have explored or applied for that are related to the proposed measures.

Measure 1: Support Organics Recycling

To date, funding to support food scraps and recycling initiatives has been largely dependent on annual state budget appropriations. Since 2010, NYSDEC has provided approximately \$11 million in funding to municipalities for food donation and food scraps recycling. However, available funding is insufficient to meet existing demand and NYSDEC anticipates an increased need for additional funding as the organics recycling industry continues to develop both in the public and private sectors. This measure would provide critically needed funds for municipal governments and would also seek to fill a gap in funding for nonprofit organics recycling organizations. Governments in New York have been awarded \$434,000 in federal funding through USDA Composting and Food Waste Reduction Agreements⁵ and Chemung County in New York was recently awarded a \$1.7 million Solid Waste Infrastructure for Recycling grant from EPA. This all reflects a need for a larger, more comprehensive grant program that would have the capacity to support a large number of communities over the next several years. Funding for this measure at the requested level would allow NYSDEC to accomplish the goals and outcomes described throughout this application.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

There are no funding sources identified for this measure. The New York State Environmental Protection Fund supports a pilot program, implemented by NYSDEC in partnership with a national nonprofit, to replace refrigeration equipment in facilities that use high-GWP substances with equipment that uses natural refrigerants. A larger and more sustained funding source is required to successfully implement this measure and to realize GHG emission reductions at scale, particularly to provide resources to smaller stores in disadvantaged communities. Refer to section 1.a. *Measure 2: Phase of Hydrofluorocarbons and Support Natural Refrigerants* for a detailed discussion of the facility transition costs and barriers for food refrigeration facilities that would be mitigated through funding for this measure.

Measure 3: Create Green Community Cooling/Heating Centers

It is assumed that all projects will leverage any available incentives to the extent that they remain available, such as the Federal Commercial Energy Efficiency Credit (179D). While these incentives may defray some of the costs, they are insufficient to ensure the deep level of envelope work proposed here in order to drive the greatest GHG emission reductions and passive thermal resilience co-benefits and do not address the predevelopment costs supported through this program. There are currently no ratepayer-funded utility or NYSERDA incentives approved for use after 2025, when these projects would be constructed. In the event ratepayer-funded incentives are made available, these projects would leverage that funding.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

The exact energy conservation measures included in each EPC will dictate which funding opportunities are available to support project implementation by blending those incentives into the financing

⁵ USDA awarded five entities across New York, including New York City, the City of Troy, the Town of Geneva, Tompkins County, and the Seneca Nation of Indians.

arrangement. All projects will be required to leverage eligible incentives, including federal tax credits and any relevant ratepayer-funded utility or NYSEDA incentives that may become available after 2025. NYSEDA is not aware of any state, federal, or other funding opportunities that support the predevelopment, engineering, and gap-filling support that would be provided by this measure.

c. Transformative Impact

The measures proposed in this application have the potential to create transformative impacts that lead to further significant GHG emission reductions, particularly if implemented simultaneously. These impacts can be realized by highlighting successfully implemented projects and stimulating the market. NYSEDA and NYSEDA are prepared to implement these measures quickly, which will allow others to follow suit and reduce GHG and co-pollutant emissions in the near-term.

Measure 1: Support Organics Recycling

- This measure increases the number of organics recycling facilities that accept food waste. The presence of successful facilities will motivate other municipalities to implement similar projects.
- An increase in organics recycling facilities will help to transform how food scraps are perceived. They will be perceived as a resource as opposed to a waste, which help to achieve a circular economy. This realization will also bolster food waste reduction and food donation while providing wholesome food to people in need.
- An increase in organics recycling can also reduce GHG emissions in other waste-related sectors such as emissions from the disposal of paper. As people become more cognizant of the circular economy, it will also lead to reduction and recycling in other sectors.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

- This measure will help to develop the supply chain for natural refrigerants and the associated technologies and equipment. There is market momentum in applications of transcritical CO₂ systems in retail food stores in North America. In 2023, the market penetration out of 231,443 retail food stores in North America is 1.27%, up from 0.7% in 2022, with these systems installed in 4.1% of supermarkets and grocery stores.⁶ There is incredible opportunity for this measure to accelerate this market transformation, driving down costs and increasing the uptake of CO₂ and other natural refrigeration systems.
- NYSEDA funded a natural refrigerant demonstration project that included transitioning a larger, traditional refrigeration rack to a more modular system that uses a smaller charge size and can also be used for space heating and cooling. These solutions address some of the challenges to this transition, including challenges related to building codes, as described in Table 4.

Measure 3: Create Green Community Cooling/Heating Centers

- This measure will develop replicable models for simultaneously addressing GHG emissions and increased need for space heating/cooling in a changing climate, which may otherwise result in conflicting priorities wherein the increased need for heating and cooling results in increased fossil fuel use and HFC emissions.
- This measure will demonstrate best practices for building community resilience to temperature extremes while ensuring reductions in the GHG emissions that are the root cause of these extreme heat and cold events.

⁶ ATMosphere. 2023. Natural Refrigerants: State of the Industry; Refrigeration in Europe, North America, and Japan, Plus Heat Pumps in Europe. Accessed at <https://atmosphere.cool/atmo-market-report-2023/>.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

- Training local governments on how to use EPCs to finance energy retrofits will have impacts beyond the program period, as these local governments will have the knowledge and experience to manage future EPC projects after 2030 for additional buildings in their portfolios.
- This measure builds the market for public sector EPC providers and financiers and provides market transparency that can build overall confidence in EPCs as a financing mechanism for entities that are new to it as a concept.
- This proposal seeks to innovate on the model of EPCs to get beyond the lowest hanging fruit of energy efficiency and addressing building types common in the region, such as historic buildings or those needing remediation, unlocking financing that is otherwise unavailable.

2. IMPACT OF GHG REDUCTION MEASURES

a. Magnitude of GHG Reductions from 2025 through 2030

Table 9 shows the magnitude of cumulative GHG emission reductions that will be achieved through the implementation of each measure for the period 2025 through 2030.

Table 9. Cumulative GHG Emission Reductions from Implementation of Proposed Measures (2025-2030)

| Measure | Reductions (mt CO₂e) 2025-2030 |
|---|--|
| <i>Measure 1: Support Organics Recycling</i> | 257,211 |
| <i>Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants</i> | 295,228 |
| <i>Measure 3: Create Green Community Cooling/Heating Centers</i> | 1,313 |
| <i>Measure 4: Support Advanced Energy Performance Contracting for Local Governments</i> | 78,396 |
| Total | 632,148 |

b. Magnitude of GHG Reductions from 2025 through 2050

Table 10 shows the magnitude of cumulative GHG emission reductions that will be achieved through the implementation of each measure for the period 2025 through 2050.

Table 10. Cumulative GHG Emission Reductions from Implementation of Proposed Measures (2025-2050)

| Measure | Reductions (mt CO₂e) 2025-2050 |
|---|--|
| <i>Measure 1: Support Organics Recycling</i> | 1,546,667 |
| <i>Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants</i> | 1,476,141 |
| <i>Measure 3: Create Green Community Cooling/Heating Centers</i> | 6,967 |
| <i>Measure 4: Support Advanced Energy Performance Contracting for Local Governments</i> | 423,585 |
| Total | 3,453,359 |

For all assumptions and information on how these measures will result in a permanent reduction in cumulative GHG emissions, see the attached Technical Appendix (Attachment B). Each measure intends

to address emissions in the short- and long-term, transforming markets and ensuring resiliency as a co-benefit of GHG emission reductions.

c. Cost Effectiveness of GHG Reductions

The measures in this application are highly cost-effective to implement. The cost effectiveness of the proposal, inclusive of all measures in this application for the period 2025-2030, is \$246 per ton of CO₂e reduced. Costs associated with each measure are detailed in Attachment A: Budget Narrative accompanying this application, and detailed assumptions about GHG emissions reductions are in Attachment B: Technical Appendix. Cost effectiveness may be impacted due to changes in assumed versus realized emissions, or changes in budgeted versus actual costs. Below are some reasons why GHG emissions realized may differ from projections:

- Market availability refrigeration equipment that may delay project completions.
- Organics projects diversion rates differ from projections (either via under- or over-estimate) which would impact the emissions related to avoided landfilling.
- Electric grid emissions do not match the projected grid emissions (either via under- or over-estimate) which would impact the emissions related to powering electrified HVAC equipment.

In addition, some costs may differ from projections for the following reasons:

- Potential changes in existing incentives available, such as federal tax credits.
- Supply chain, inflation, or other market changes impact the costs associated with support services, construction, or organics projects.

Descriptions of how these risks to cost effectiveness will be managed are described in section 1.a.

d. Documentation of GHG Reduction Assumptions

Details on quantification methods, relevant assumptions, annual emission reduction estimates, and any uncertainties associated with the estimates are provided in the attached Technical Appendix (Attachment B).

3. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

As discussed in section 1.a, each of the measures included in this proposal supports the EPA FY 2022-2026 Strategic Plan Goal 1 “Tackle the Climate Crisis” Objective 1.1, “Reduce Emissions that Cause Climate Change.” The measures also support implementation of the New York State Climate Action Council Scoping Plan. These measures will result in steep and swift reductions in GHG emissions. Table 11 details the expected measure-specific outputs and outcomes in both the short- and long-term. Table 12 and Table 13 list the co-pollutant emission reductions expected for each measure.

a. Expected Outputs and Outcomes

In addition to the information in the following table, outputs for all measures from this proposal include semi-annual progress reports⁷ and a detailed final report.

⁷ Beginning with the second semi-annual report, reporting will include detailed quantified benefits to low-income and disadvantaged communities, including changes in co-pollutant emissions, and provide updates on ongoing and planned community engagement.

Table 11. Measure-Specific Expected Outputs and Outcomes

| Measure | Expected outputs | Expected outcomes |
|---|--|---|
| <i>Measure 1: Support Organics Recycling</i> | <ul style="list-style-type: none"> • 40 new organics recycling facilities or programs to manage food scraps • Pounds of food diverted from landfills • Pounds of food donated • Recommendations implemented from New York State Solid Waste Management Plan • More businesses and institutions subject to food donation and food scrap recycling provisions | <ul style="list-style-type: none"> • GHG emission reductions • Less food scraps landfilled results in fewer impacts to neighboring communities such as less leachate to manage, and less truck traffic and associated air pollution • Additional food scraps facilities result in new, high-quality jobs in the host community • Reduced food waste through increased food donation |
| <i>Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants</i> | <ul style="list-style-type: none"> • 100 ultra-low or zero GWP refrigeration systems installed • Workforce training opportunities at multiple installment sites; sites would serve different audiences and would include multiple equipment types | <ul style="list-style-type: none"> • GHG emissions reductions • Newly installed equipment is more energy efficient • Greater awareness of HFC impacts and existing global phase out • Increased food security |
| <i>Measure 3: Create Green Community Cooling/Heating Centers</i> | <ul style="list-style-type: none"> • 18 building studies completed • 10 cooling/heating centers upgraded and with trained staff • Number of communities/people served | <ul style="list-style-type: none"> • GHG and co-pollutant emission reductions • Energy savings • Increased community resiliency to extreme temperatures • Replicable models to pair emissions reductions with resiliency |
| <i>Measure 4: Support Advanced Energy Performance Contracting for Local Governments</i> | <ul style="list-style-type: none"> • 300 buildings retrofitted • 50 communities trained on EPCs • Amount of financing leveraged • Number of model procurement/contracting documents developed | <ul style="list-style-type: none"> • GHG and co-pollutant emission reductions • Energy savings |

Table 12. Expected Air Pollutant and Health Impacts for all Measures Statewide

| Measure | Air Pollutant Reductions | | Health Impacts (cumulative, \$) | |
|---|---|--|---------------------------------|-------------|
| | In 2030 | 2025–2050 | In 2030 | 2025–2050 |
| <i>Measure 1: Support Organics Recycling</i> | n/a | n/a | n/a | n/a |
| <i>Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants</i> | n/a | n/a | n/a | n/a |
| <i>Measure 3: Create Green Community Cooling/Heating Centers</i> | NH ₃ 0 NO _x 0.25 PM _{2.5} 0 SO ₂ 0 VOC 0.01 | NH ₃ 0.06 NO _x 4.03 PM _{2.5} 0.01 SO ₂ 0.03 VOC 0.18 | \$6,645 | \$106,313 |
| <i>Measure 4: Support Advanced Energy Performance</i> | NH ₃ 0.32 NO _x 14.76 PM _{2.5} 0.04 | NH ₃ 5.04 NO _x 236.20 PM _{2.5} 0.58 | \$379,882 | \$6,078,084 |

| | | | | | | |
|--|-------------------------|--------------|-------------------------|---------------|------------------|--------------------|
| <i>Contracting for Local Governments</i> | SO ₂ | 0.12 | SO ₂ | 1.93 | | |
| | VOC | 0.55 | VOC | 8.79 | | |
| Total | NH₃ | 0.32 | NH₃ | 5.10 | \$386,527 | \$6,184,397 |
| | NO_x | 15.01 | NO_x | 240.23 | | |
| | PM_{2.5} | 0.04 | PM_{2.5} | 0.60 | | |
| | SO₂ | 0.12 | SO₂ | 1.96 | | |
| | VOC | 0.56 | VOC | 8.97 | | |

Table 13. Expected Air Pollutant and Health Impacts for LIDAC Census Tracts and Block Groups

| Measure | Air Pollutant Reductions | | Health Impacts (cumulative, \$) | |
|---|---|---|---------------------------------|--------------------|
| | In 2030 | 2025–2050 | In 2030 | 2025–2050 |
| <i>Measure 1: Support Organics Recycling</i> | n/a | n/a | n/a | n/a |
| <i>Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants</i> | n/a | n/a | n/a | n/a |
| <i>Measure 3: Create Green Community Cooling/Heating Centers</i> | NH ₃ 0 NO _x 0.25 PM _{2.5} 0 SO ₂ 0 VOC 0.01 | NH ₃ 0.05 NO _x 3.93 PM _{2.5} 0.01 SO ₂ 0.03 VOC 0.18 | \$6,645 | \$106,313 |
| <i>Measure 4: Support Advanced Energy Performance Contracting for Local Governments</i> | NH ₃ 0.15 NO _x 7.21 PM _{2.5} 0.02 SO ₂ 0.06 VOC 0.27 | NH ₃ 2.46 NO _x 115.38 PM _{2.5} 0.29 SO ₂ 0.94 VOC 4.29 | \$185,571 | \$2,969,150 |
| Total | NH₃ 0.16 NO_x 7.46 PM_{2.5} 0.02 SO₂ 0.06 VOC 0.28 | NH₃ 2.52 NO_x 119.30 PM_{2.5} 0.30 SO₂ 0.97 VOC 4.47 | \$192,216 | \$3,075,463 |

Air pollutant reductions and health impacts are prorated by the portion attributable to CPRG. For additional detail, see Attachment C: GHG Emission Reduction Calculations Spreadsheet. Health impacts quantified were mortality; nonfatal heart attacks; infant mortality hospital admits, all respiratory; hospital admits, cardiovascular (excluding heart attacks); acute bronchitis; upper respiratory symptoms; lower respiratory symptoms; emergency room visits, asthma; asthma exacerbation; minor restricted activity days; work loss days. For additional breakdown of incidence and monetary value for each health impact, see Attachment C: GHG Emission Reduction Calculations Spreadsheet.

b. Performance Measures and Plan

NYSDEC has established the following performance measures to track progress concerning successful processes and output and outcome strategies. NYSDEC may include additional performance measures as appropriate.

- Release of various procurements (e.g., RFA for organics program; solicitation for third-party program administrator for natural refrigerants program)
- Project selection

- Number of outreach events and community engagement meetings
- Project completions
- Pounds of food waste diverted
- Actual GHG emission reductions resulting from project completions
- Energy savings resulting from project completions

NYSDEC will leverage project partnerships to track progress for each performance measure. As stated in section 1.a, NYSDEC will procure a contractor to track and report on metrics for the measure to support organics recycling. In addition, the third-party program administrator selected to administer the natural refrigerants program will be responsible for tracking and reporting metrics on a regular basis throughout the grant period. NYSERDA will report to NYSDEC on the progress toward achieving the expected outputs and outcomes for Measures 3 and 4 that it is responsible for implementing.⁸ NYSDEC will provide a status update with respect to each performance measure to EPA in the semi-annual reports and final report.

c. Authorities, Implementation Timeline, and Milestones

Table 14 identifies the respective authority to carry out the measure. NYSDEC and NYSERDA have existing authority to fully implement the measures contained in this application under the New York State Environmental Conservation Law (ECL), the New York State Public Authorities Law (PAL), and the New York State Energy Law (ENG). Table 15 details the timeline for reporting on the overall grant.

Table 14. Authority to Implement GHG Emission Reduction Measures

| Measure | Implementing Entity | Legal Authority |
|--|---------------------|--|
| Measure 1: Support Organics Recycling | NYSDEC | ECL § 3-0301(2)(b) |
| | | ECL § 3-0301(1)(o) |
| Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants | NYSDEC | ECL § 3-0301(2)(b) |
| | | ECL § 3-0301(1)(b) |
| | | ECL § 3-0301(1)(i) |
| Measure 3: Create Resilient and Green Public Facilities | NYSERDA | PAL Article 8, Title 9, §§ 1850 <i>et seq.</i> |
| Measure 4: Support Advanced Energy Performance Contracting for Local Governments | NYSERDA | PAL Article 8, Title 9, §§ 1850 <i>et seq.</i> |
| | | ENG Article 9 |

Table 15. Reporting Tasks and Milestones

| Task # | Task Description | Anticipated Milestone Timeframe |
|--------|--------------------------------------|---------------------------------|
| 1 | Submit semi-annual progress report 1 | Year 1, Month 6 |
| 2 | Submit semi-annual progress report 2 | Year 1, Month 12 |
| 3 | Submit semi-annual progress report 3 | Year 2, Month 6 |
| 4 | Submit semi-annual progress report 4 | Year 2, Month 12 |
| 5 | Submit semi-annual progress report 5 | Year 3, Month 6 |
| 6 | Submit semi-annual progress report 6 | Year 3, Month 12 |

⁸ NYSERDA currently gathers and reports on a comprehensive range of metrics across New York’s clean energy programs. NYSERDA’s reporting structure has the capability to track and analyze program metrics across different sectors, geographies, and funding sources.

| | | |
|---|--------------------------------------|------------------|
| 7 | Submit semi-annual progress report 7 | Year 4, Month 6 |
| 8 | Submit final progress report | Year 4, Month 12 |

Table 16 identifies the general roles and responsibilities for implementing the GHG reduction measures in this application. A detailed implementation timeline, including tasks, key milestones, and key actions needed to meet measure goals and objectives by the end of the grant period for each measure, is provided in section 1.a of this proposal.

Table 16. Roles and Responsibilities

| Implementing Entity | Roles and Responsibilities |
|---------------------|--|
| NYSDEC | <ul style="list-style-type: none"> • Develop subaward or contract agreement(s) with NYSDERDA and pass through all applicable terms and conditions • Procure and oversee program administrators and other contractors • Track and report on expenditures program implementation • Submit semi-annual progress reports and final report to EPA |
| NYSDERDA | <ul style="list-style-type: none"> • Accept subaward or contract terms passed down from EPA • Track and report on expenditures and program implementation to NYSDEC |

In addition to the general roles and responsibilities above, the following paragraphs describe the roles and responsibilities of the various parties that would be involved in the implementation of each specific measure and whose cooperation is necessary to carry out each measure.

Measure 1: Support Organics Recycling

NYSDEC is responsible for hiring staff, developing and releasing an RFA, selecting projects, and seeing projects through to completion. Beneficiaries of each project and program participants are responsible for implementing the proposed project adhering to all contract requirements as laid out by NYSDEC and EPA. NYSDEC is also responsible for procuring a contractor to track and report on metrics related to the measure. The selected contractor is responsible for reporting such metrics to NYSDEC.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

NYSDEC is responsible for procuring a third-party administrator to implement a competitive incentive program for retail food stores and other facilities that serve food security purposes. The third-party administrator is responsible for developing program criteria, in partnership with NYSDEC, and releasing at least two incentive rounds. The program administrator will also be responsible for tracking overall program metrics as described earlier in section 3. Program participants are responsible for procuring equipment, scheduling installations, and adhering to all contract requirements as laid out by NYSDEC and EPA.

Measure 3: Create Green Community Cooling/Heating Centers

NYSDERDA would procure and oversee a contract(s) with engineering firm(s), who would be deployed to perform energy studies on properties within the awarded municipalities and CBOs. NYSDERDA would also contract with service providers to offer trainings on thermal resilience. Engineering firms will be responsible for providing objective, site-specific and targeted studies of community facilities on how to best implement clean and/or energy efficiency technologies that reduce GHG emissions. NYSDERDA would also provide support to applicants post-award in the form of assistance applying for incentives, support for outreach and engagement, and training on facility operations. NYSDERDA would issue a solicitation to invite local governments and CBOs to participate in the program and oversee municipal

expenditures and progress towards milestones. NYSERDA would be responsible for tracking outputs and outcomes as described in section 3.a.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

NYSERDA would procure TA providers to support engineering, pre-development services, marketing and template material, development, and design services for use by local governments. NYSERDA would also pre-qualify lenders and ESCOs that serve the New York State municipal market. Finally, NYSERDA would contract with local governments that receive Phase 1 technical assistance and Phase 2 and 3 grants. The engineering TA providers would provide technical assistance to municipalities related to predevelopment, design, and aggregation of portfolios as described in section 1.a. Participating local governments will be required to dedicate in-kind cost share in the form of staff time to ensure that staff learn how to perform subsequent EPC procurements without TA. They will also be required to make their staff and facilities available for project scoping and walk-throughs, throughout the construction process, and for operational trainings on new energy systems. Municipalities will also be required to report on project progress, outputs, and outcomes to NYSERDA. Prequalified ESCOs will be responsible for delivering services contracted by municipalities. They will also be required to perform M&V according to standard M&V protocols. Prequalified lenders will be responsible for providing financing per the terms of their agreements.

4. LOW-INCOME AND DISADVANTAGED COMMUNITIES

a. Community Benefits

The implementation of the measures included in this application are anticipated to provide significant benefits to LIDACs in furtherance of the goals of the Justice40 Initiative and the Climate Act. Each individual measure, once implemented, will provide the measure-specific benefits to LIDACs listed below. In addition, this slate of measures is designed to enhance community benefits when implemented together.

Measure 1: Support Organics Recycling

- Increasing the recycling of food scraps will reduce the burden on LIDACs if a landfill is located within or nearby by reducing truck traffic and associated air pollution, odors, dust, noise, and other similar impacts.
- Composting and other organics facilities provide employment opportunities at the facilities, from local food scraps collection, and product distribution and use.
- Organics recycling programs result in increased food donation to assist those in need.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

- All projects supported through this measure will be located in a disadvantaged community. Program criteria will require that project sponsors demonstrate commitment to the community it serves (e.g., demonstrate commitment to ensuring residents of LIDACs have access to fresh food; support a food bank that alleviates food insecurity in a LIDAC).
- Projects may present opportunities to provide on-site workforce training and/or outreach to local community.
- Moving directly to natural refrigerants ensures that communities avoid potential adverse impacts from new synthetic substances. For example, stakeholders in NY have expressed concerns over the unknown risks from newly introduced hydrofluorolefins (HFOs) both in terms of direct exposure and as per- and polyfluorinated substances (PFAS).

Measure 3: Create Green Community Cooling/Heating Centers

- This measure increases community climate resiliency and provides public health benefits by increasing the number of New Yorkers with access to heating and cooling centers located in and serving disadvantaged communities.
- Heating and cooling centers are particularly helpful for medically vulnerable individuals, such as the elderly, as well as low-income households that may be unable to afford increasing energy demand associated with extreme temperatures. Moreover, these sites may be used to channel resources to these populations, such as enrollment in the Weatherization Assistance Program or materials for flood risk awareness and prevention.
- Facilities installing energy efficiency and envelope measures should see reduced energy bills, allowing more resources to be dedicated to staffing, operations, or other needs.
- By encouraging passive house-level envelope upgrades, facilities may be able to maintain safe temperatures for longer in the event of a power outage or HVAC system failure and reduce the HVAC system size to save on operational and equipment costs.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

- This measure will allow resource-constrained local governments to access building upgrades that reduce emissions, improve thermal comfort, and address health and safety concerns.
- This measure will free up municipal capital funds for other public works projects that address community needs.
- Advanced EPCs may enable older buildings and those with remediation needs to be not left behind in the transition to a clean, energy efficient economy, as these projects would otherwise not be financeable.
- Deeper support in this program will be reserved for facilities in disadvantaged community census tracts.

A list of all LIDAC census tracts affected by this proposal is included as an attachment to this application. This list of census tracts also includes a comparison between New York State-designated disadvantaged community census tracts, and census tracts that are either labeled as disadvantaged within CEJST or EIScreen census block groups that exceed the 90th percentile for the State in supplemental indices. This analysis shows an almost 80% overlap between the State and federal definitions.

Under New York State's Climate Act, each agency, authority, and entity that makes certain climate pollution mitigation investments must track and report annually the investments occurring in disadvantaged communities, associated co-benefits, and any other related outcomes associated with these investments.⁹ Dollars invested through place-based programs or investments are the primary metric tracked. In addition to tracking investment dollars, New York State agencies, authorities, and entities also track co-benefits associated with place-based and statewide programs or investments, as shown in Table 17. New York State will produce an annual report tracking the State's progress toward meeting the 35% investments and benefits requirements and the 40% goal.¹⁰ Each annual report will track clean energy and/or energy efficiency investments made by New York State through the past calendar year. NYSERDA will be responsible for compiling data templates submitted by agencies and

⁹ The Draft Climate Act Disadvantaged Communities Investment and Benefits Reporting Guidance can be found at <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria/Investments-and-Benefits-Reporting-Guidance>.

¹⁰ The Climate Act requires that New York-designated disadvantaged communities receive at least 35% of the overall benefits of spending on clean energy and energy efficiency programs, with a goal of 40%.

producing outputs for reporting, such as data visualizations and aggregated files, which agencies can use as part of their quality assurance/quality control processes. The State will leverage the geospatial data collection process from this framework to perform a similar analysis for CPRG-funded projects, using federally designated CEJST census tracts or census block groups at or above the 90th percentile for New York State within EJScreen’s supplemental indices.

Table 17. Co-Benefits Categories for Climate Act Reporting

| Co-Benefits Category | Co-Benefits Metrics |
|--|---|
| Electricity and Fuel Savings, where applicable | Electricity savings (MWh) Fuel savings (MMBtu) |
| Participant bill savings, where applicable | Participant bill savings from reductions in electricity and fuel usage (\$) Transportation fuel cost savings (Dollars) |
| Health benefits related to outdoor/ambient air quality | Monetized health impacts due to changes in electricity and fuel use (\$) Reduction in air pollutants (NH ₃ , NO _x , PM _{2.5} , SO ₂ , VOC) |

b. Community Engagement

Input from LIDACs helped to inform the GHG emission reduction measures in the CPRG Program PCAP for New York State, and therefore the measures contained within this application. More information on that engagement can be found in section 2.3 of the PCAP. In addition, the measures contained within the PCAP were informed by a multi-year climate planning process done in consultation with New York’s Climate Justice Working Group pursuant to the Climate Act and involving a robust public engagement process, including 11 public hearings across the state and a six-month public comment period that resulted in over 35,000 public comments. As stated in the description for each measure included in this proposal, NYSDEC and NYSDERDA intend to continue meaningful engagement with LIDACs throughout implementation. These efforts include public meetings, targeted surveys, outreach to organizations that represent LIDACs, and/or soliciting comments on program criteria.

In addition, both NYSDEC and NYSDERDA have existing offices or programs that allow for meaningful engagement. NYSDEC houses an Office of Environmental Justice that works to address environmental issues and concerns that affect primarily low income and minority communities through grant opportunities, enforcement of environmental laws and regulations, consultation, guidance, and enhanced public participation. NYSDEC also has a Climate Smart Communities program that supports local governments in leading their communities to reduce GHG emissions, adapt to the effects of climate change, and thrive in a green economy. NYSDERDA manages programs to consult and engage with CBOs and stakeholders that are representative of, or principally serve, disadvantaged communities to work together to address energy equity and climate justice issues and develop equitable programs. These programs, such as the Energy Equity Collaborative and Disadvantaged Communities Stakeholder Pool, also have mechanisms to compensate these stakeholders for their time and expertise. NYSDEC and NYSDERDA will use these offices or programs to frequently engage with LIDAC stakeholders to seek input on program design.

Measure 1: Support Organics Recycling

NYSDEC will work with existing municipal and nonprofit partners to select projects that will result in the greatest volume of organic material diverted and the greatest number of benefits to disadvantaged communities, as described in section 4.a. NYSDEC will leverage existing partnerships with municipal officials, food waste reduction organizations, and disadvantaged community representatives.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

NYSDEC will work with new and existing partners to develop program criteria that prioritizes facilities that also commit to food waste diversion and donation, maximizing emissions reductions. It will also work with new and existing partners to determine how best to ensure selected projects achieve the goal of food security in the local community.

Measure 3: Create Green Community Cooling/Heating Centers

NYSERDA will leverage existing relationships with CBO networks to ensure widespread awareness of the Green Community Cooling/Heating Center opportunity, such as the Regional Clean Energy Hubs which primarily engage residents of disadvantaged communities as well as organizations that serve disadvantaged communities, or the Clean Energy Communities program which primarily engages local governments. In addition, applicants will be scored according to the quality of their stakeholder relationships and engagement plans.

Measure 4: Support Advanced Energy Performance Contracting for Local Governments

Prior to implementing the solicitation, NYSERDA will perform interviews with local government stakeholders to inform specifics of program design to ensure it is responsive to needs at that moment in time. NYSERDA may perform additional interviews ahead of program rounds 2 and 3 and adjust program design characteristics based on feedback received and experience with round 1.

5. JOB QUALITY

As discussed within each measure description, some measures will result directly in new jobs (e.g., building and operating new facilities) and some will support the local technician workforce through free workforce training events and other outreach events. These efforts all support the overall goal of a just transition to a green economy. For example, sustainable materials management policies support the creation of jobs and new opportunities for economic growth by retaining the value of materials, keeping that value within the supply chain, and presenting new business models where the value of resources is maintained within a circular economy. Investments using CPRG funds will comply with Davis Bacon Prevailing Wage and Build America, Buy America requirements of this funding opportunity, which will guarantee job quality across the value chain. In addition, given that this proposal will primarily consist of work undertaken by local government entities, those entities already have their own requirements related to prevailing wage and project labor agreements. This will further ensure that work is completed according to Good Jobs Principles.

6. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Past Performance

The measures included in this application leverage existing programs and capabilities at NYSDEC and NYSEDA in order to act expeditiously to reduce emissions and maximize the impact of CPRG funding by 2030. NYSDEC has an effective and efficient organics recycling grant program in place and additional funds can be disbursed without the establishment of a new grant system, which leads to significant savings in time and cost for program implementation. NYSDEC has run a successful pilot program for upgrading to natural refrigerants in food stores in disadvantaged communities which is the model for the program proposed in this application. NYSEDA has nation-leading expertise in scoping, launching, and managing programs to support the installation of weatherization, energy efficiency and clean heating and cooling technologies. NYSEDA will leverage its work on the soon to be released New York State Extreme Heat Action Plan, which utilized a stakeholder driven approach to develop holistic

strategies to address increasing heat risk, in identifying community priority solutions for extreme temperature resilience. NYSERDA provides technical assistance and grant funding to local governments through its long-standing Clean Energy Communities program. These existing and trusted relationships with local governments will allow these programs to scale-up quickly. NYSERDA was an early proponent of energy performance contracting, managing EPC programs since the 1990s.

In addition, NYSDEC has successfully implemented several other federal grants within their jurisdictions. Some examples of federally funded assistance agreements that NYSDEC is performing or has performed within the last three years are listed below.

- New York State Inflation Reduction Act Clean Air Act Grant
 - Assistance Agreement Number: 96218323
 - Funding Agency: U.S. Environmental Protection Agency
 - Assistance Listing Number: EPA-OAR-ARP-22-02
 - Description: Support of EPA Strategic Plan Goal of ensuring clean and healthy air for all communities. Conduct air quality monitoring activities, increase training of personnel, and develop outreach material to increase public awareness.
 - Contact: Sarah Pender, pender.sarah@epa.gov, (212) 637-3367
- NYSDEC PM_{2.5} Ambient Air Monitoring Network 23/24
 - Assistance Agreement Number: 96233121
 - Funding Agency: U.S. Environmental Protection Agency
 - Assistance Listing Number: EPA-CEP-01
 - Description: NYSDEC Division of Air Resources will use the grant funds for the operation and maintenance of an annual and 24-hour PM_{2.5} National Ambient Air Quality Standard (NAAQS) monitoring network and implementation of the National Core (NCore) program in New York State.
 - Contact: Emmet Keveney, keveney.emmet@epa.gov, (212) 637-3459
- 2022 Consolidated Payment Grant
 - Assistance Agreement Number: 22-DG-11094200-170
 - Funding Agency: U.S. Forest Service
 - Assistance Listing Number: 10.664 - Cooperative Forestry Assistance
 - Description: Support for New York State's core forestry programs, with segments dedicated to urban and community forestry, forest stewardship, and forest health management.
 - Contact: Midori Raymore, midori.raymore@usda.gov, (414) 721-1346

b. Reporting Requirements

For each of the federal grants listed above, NYSDEC has successfully submitted interim and final reports adequately and on time in an effort to progress toward achieving the respective expected outputs and outcomes under the agreement.

c. Staff Expertise

NYSDEC is a statewide regulatory agency that has over 3,000 professional staff that work across dozens of programs in the central office or in one of the nine regional offices across New York. It has mature processes in place to accept and implement federal grants across its various programs. Team biographies for staff from both NYSDEC and NYSERDA that would be directly involved in the implementation of this proposal are attached to this application.

7. BUDGET

a. Budget Detail

Please refer the attached budget narrative (Attachment A) for more information. If a budget category is not listed, NYSDEC does not anticipate any expenditures in those categories for the respective measure.

Measure 1: Support Organics Recycling

NYSDEC Personnel and Fringe

Total personnel and fringe: \$563,996. This funding would support salary and fringe benefits for 1 FTE for the duration of the grant period.

Total personnel: \$345,099. NYSDEC will hire one new Environmental Program Specialist at the current entry level salary of \$65,001 for this position, including 3% salary increases each year through the duration of the budget period.

Total fringe: \$218,896. NYSDEC calculates fringe benefits at a rate of 63.43% of annual salary. Fringe benefits include disbursements incurred by the State for the benefit of its employees and includes the costs to the State, as an employer, for retirement plans, Social Security, health insurance, dental insurance, Worker's Compensation, Survivor's Benefits, unemployment insurance and the State's contribution to the Employee Benefit Funds pursuant to agreements with the various bargaining units.¹¹

NYSDEC Contractual

Total contractual: \$20,250,000. NYSDEC would release an RFA to solicit projects under this measure.

There would be \$20,000,000 available under this procurement. In addition, NYSDEC would make \$250,000 available to procure a contractor to measure and report on various metrics related to program implementation (e.g., pounds of waste diverted) throughout the course of the grant period.

NYSDEC Indirect Costs

Total indirect costs: \$96,697. NYSDEC calculates indirect costs at a rate of 28.02% of annual salary.

Indirect costs include, but are not limited to, physical overhead, space occupancy, utilities, information technology, and central service agency costs.

Measure 2: Phase Out Hydrofluorocarbons and Support Natural Refrigerants

NYSDEC Travel

Total travel: \$3,868. This budget would support NYSDEC staff to travel to workshops, workforce training events, and/or outreach events related to the implementation of this measure.

NYSDEC Other

Total other: \$57,500,000. NYSDEC would make 15% of the program total, or \$7,500,000 available to competitively procure a third-party program administrator to manage the implementation of projects and associated administrative tasks, such as reporting and metrics tracking. In addition, NYSDEC would seek approval of the EPA's Award Official to incur Participant Support Costs in the amount of \$50,000,000 to fund projects that phase out HFCs and support natural refrigerants. These funds would be available to the competitively selected third-party program administrator to implement the program to fund the installation of 100 full or partial natural refrigeration systems.

¹¹ Fringe benefits are defined by the Office of the New York State Comptroller.

Measure 3: Create Resilient and Green Public Facilities and Measure 4: Support Advanced Energy Performance Contracting for Local Governments

NYSDEC Other

Total other: \$77,293,600. NYSDEC will subaward/contract funds to NYSED to implement Measure 3 in the amount of \$37,045,899 and Measure 4 in the amount of \$40,258,610. Additional detail on how NYSED intends to allocate these funds can be found in Attachment A: Budget Narrative.

b. Expenditure of Awarded Funds

NYSDEC will expend and account for awarded funds in accordance with state laws and procedures for expending and accounting for the State's own funds. The financial management system for NYSDEC complies with the requirements of 2 CFR 200.302(b). NYSDEC will enter into agreements with NYSED prior to disbursement of subaward funds to implement Measure 3 and Measure 4. These agreements will include all applicable pass-through requirements for subrecipients in accordance with [EPA's Subaward Policy](#) and [EPA's General Term and Condition for Subawards](#). The semi-annual reports and final report will include a breakdown, by measure, of expenditures associated with implementation of this proposal.

c. Reasonableness of Costs

All budgeted costs are necessary to ensure the successful completion of the measures included here, as well as to realize the projected GHG emission reductions and co-benefits. Costs included in this proposal were based on past NYSDEC and NYSED experience in managing programs, and other sources as identified in the Technical Appendix (Attachment B). NYSDEC estimates of costs for organics recycling and refrigerant measures is based on current programming and additional research into the costs of the similar programs. Costs may be impacted by the size or complexity of the individual projects selected. Costs for green heating/cooling centers and advanced EPCs were based on previous experience with building energy-focused programs implemented by NYSED. These costs may be impacted by market availability, inflation, and supply chains for key materials. Additional information on the budget, including a detailed breakout of requested funding for each work component and how each budget item relates to the project narrative can be found in section 7.a and Attachment A: Budget Narrative.