

CLIMATE SMART COMMUNITIES GRANTS



Office of
Climate Change

Refrigerant Management at the Community Level

Reduction of Refrigerant Use and Leakage

Fluorinated greenhouse gases are the most potent and persistent of the greenhouse gases (GHGs), generally thousands of times more powerful than carbon dioxide at trapping heat in the atmosphere. One of the most common sources of fluorinated GHGs are the refrigerants used in air-conditioning and refrigeration systems.

The Climate Smart Communities (CSC) Grant Program includes a category for municipal projects that mitigate the impacts of fluorinated GHGs used in air-conditioning and refrigeration systems. If your local government is interested in applying for a CSC grant, please refer to this link for full information about the program:

<https://www.dec.ny.gov/energy/109181.html#CSC>

How does this grant category apply to my community?

Reducing Refrigerant Emissions from Municipal Operations

As a starting point, local governments should evaluate the opportunities for reducing refrigerant emissions from equipment that is under their direct control through the implementation of a refrigerant management program (RMP). Components of a RMP include procurement guidance, technician certification, refrigerant inventory, leak management, and proper disposal and reclamation.

- Develop procurement guidance to help eliminate the purchase of equipment containing fluorinated GHGs, as well as ensure that proper protocols are followed by contractors during installation, maintenance, disposal, and reclamation. The New York State Office of General Services has developed procurement recommendations for climate-friendly refrigerants, which can be found here: <https://ogs.ny.gov/greenny/refrigerant-containing-equipment>
- Complete a refrigerant inventory to provide a baseline of existing systems, reveal opportunities for improvement, and expose potential impacts. To complete a refrigerant inventory, work with municipal facilities staff (and/or with contractors) to do the following:
 - Identify equipment that contains refrigerants (e.g., HVAC systems, food storage, ice rinks).
 - Determine the approximate age of equipment, the refrigerant used and its global warming potential (GWP), and the charge (in pounds). Refer to the resources below for more information.
 - Determine leak rate(s), how often equipment is serviced, how leaks are monitored and addressed, and how much refrigerant is added on an annual basis.
- If the equipment is old, in poor operating condition, or uses a high-GWP refrigerant, consider replacing the equipment with a model that uses a low-GWP refrigerant, or consider retrofitting the system to use an alternative refrigerant or less refrigerant. Avoid equipment that uses hydrofluorocarbons (HFC).
- If replacing or retrofitting municipal equipment is not an option, a leak management system should be implemented. If the equipment is maintained by municipal staff, consider procuring a hand-held leak detector to identify where repairs are needed. If the equipment is maintained by another entity, work with your service provider to develop new protocols for regular leak testing and repair along with record keeping so the municipality can monitor and calculate emissions from refrigerants.

Reducing Refrigerant Emissions from Other Sources in the Community

Another opportunity for reducing fluorinated GHG emissions is to work with other entities in the community to improve overall awareness, enable the adoption of low-GWP alternatives, and/or ensure proper disposal of refrigerants.

- Evaluate and improve local disposal programs to ensure that equipment (such as household appliances) is being properly disposed of and that refrigerants are being recovered and recycled or destroyed. Refer to the resources below for additional information.
- Review local ordinances to identify opportunities to reduce emissions from refrigerants and encourage the use of alternatives. Examine local and state building codes to confirm they enable the safe use of alternative refrigerants. Adopt new regulations, incentives, or other programs to ensure that businesses are properly monitoring, repairing, and disposing of their equipment and refrigerants.
- Establish education and outreach programs for residents and/or businesses within the community about the climate-change impacts of refrigerants and options for reducing these emissions.

Where can I find additional information?

The **New York State Pollution Prevention Institute** is available to offer technical support to municipalities applying for CSC grants for projects focused on reducing refrigerant emissions.

- For help, email nysp2i@rit.edu or call 585-475-2512.

Please also visit these websites for additional information on refrigerant management and reducing GHGs:

- Case study on implementing more environmentally friendly refrigerants at the University of Albany: https://ogs.ny.gov/system/files/documents/2020/12/case-study-refrigerant_1.pdf
- Overview of GHGs: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>
- Guidance on available refrigerants and their GWP: <https://www.epa.gov/snap>
- EPA Responsible Appliance Disposal: <https://www.epa.gov/rad>
- Specific guidance for certain types of equipment that may exist in the community, e.g., best practices for supermarkets: <https://www.epa.gov/greenschill>
- Additional general guidance on low-GWP refrigerants: <https://www.climatefriendlycooling.com>
- Use the ENERGY STAR Product Finder to find low-GWP equipment by selecting “Lower impact on global warming” under “Refrigerant Type”: <https://www.energystar.gov/productfinder/>
- Database for consumers of hydrofluorocarbon-free equipment that relies on natural refrigerants and other sustainable cooling technologies: <https://cooltechnologies.org/>
- State regulation of hydrofluorocarbon (HFC) substances - 6 NYCRR Part 494: <https://www.dec.ny.gov/regulations/119026.html>
- Federal regulation of HFC substances - American Innovation and Manufacturing (AIM) Act of 2020: <https://www.epa.gov/climate-hfcs-reduction/aim-act>

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