

Commercial Refrigeration Grant Program

June 21, 2022
Listening Session



Agenda

- ▶ Background
- ▶ Program design features
- ▶ Discussion questions

Background

- ▶ Hydrofluorocarbons (HFCs) are potent greenhouse gases (GHGs) that have global warming potentials (GWPs) hundreds to thousands of times that of carbon dioxide (CO₂).
- ▶ Many refrigeration systems use HFCs, which leak to the atmosphere over time.
- ▶ Commercial refrigeration accounts for roughly 30% of estimated HFC emissions in MA, making it the largest single contributing end-use.
- ▶ Technologies using low GWP (<1500) and ultra-low-GWP (<10) are available, but adoption is low.
- ▶ The grant program aims to incentivize the adoption of these technologies and encourage associated workforce development and information sharing.

Proposed incentives by project type

Project Type	Draft Maximum Incentive Amount
Installation of ultra-low-GWP (<10) refrigerant systems at a new facility	Lower of \$75,000 or incremental cost of ultra-low-GWP system for projects located in Environmental Justice populations
	Lower of \$50,000 or incremental cost of ultra-low-GWP system for all other projects
Installation of ultra-low-GWP (<10) refrigerant systems at an existing facility	Lower of \$200,000 or incremental cost of ultra-low-GWP system for projects located in Environmental Justice populations
	• Full or partial system conversion Lower of \$150,000 or incremental cost of ultra-low-GWP system for all other projects
Refrigerant retrofit from high-GWP (>3900) to lower-GWP (<1500) refrigerant	Lower of \$75,000 or 50% of refrigerant retrofit costs for projects located in Environmental Justice populations
	Lower of \$50,000 or 25% of refrigerant retrofit costs for all other projects

Proposed eligibility requirements

- ▶ Projects must have planned completion dates within 5 years.
- ▶ Applicant must own or operate a retail food location in Massachusetts.
- ▶ All projects must use certified technicians. Technicians must be certified under the United States Environmental Protection Agency (U.S. EPA) 608 program and licensed in the state of Massachusetts.
- ▶ Any refrigerant from systems that are replaced or retrofit at existing facilities must be removed or treated in accordance with existing laws and regulations.
- ▶ Applicants may apply for multiple project types and multiple project locations. A unique application must be submitted for each location.
- ▶ Projects must obtain all relevant state, local, regional, and federal permits.
- ▶ For retrofit projects, the existing system must use 50lb or more of a refrigerant with a GWP >3900

Proposed evaluation metrics

- ▶ The cost effectiveness of the project measured as dollars per metric ton of avoided carbon dioxide equivalent emissions (\$/MTCO₂E).
- ▶ The applicant is a small or independent grocer as determined by the number of locations.
- ▶ The applicant has a robust workforce development plan or partnership to provide free training to local contractors. Expectations for the scale of the workforce development plan will be proportional to the size of the applicant.
- ▶ The applicant commits to share information with the MA retail food industry on the implementation of low-GWP commercial refrigeration systems. Expectations for the scale of information sharing will be proportional to the size of the applicant.
- ▶ The project is located in an Environmental Justice population.*
- ▶ The applicant or contractor and/or installer is listed as a certified business with the Supplier Diversity Office.**
- ▶ The project will be completed earlier than the 5-year implementation deadline.

*<https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>

**<https://www.mass.gov/orgs/supplier-diversity-office-sdo>

Emissions Reductions Calculations

- ▶ Emissions reductions will be calculated as follows:

$$\text{Avoided MTCO}_2\text{E} = \text{Remaining Years of Operation} * [(\text{GWP}_B * \text{Charge}_B * \text{Leakage}_B) - (\text{GWP}_N * \text{Charge}_N * \text{Leakage}_N)] / 2204.6$$

Where,

GWP_B is the GWP of the refrigerant in the existing system

Charge_B is the pounds of refrigerant charge of the old refrigerant

Leakage_B is the annual leak rate of the existing system (as documented in application materials)

GWP_N is the GWP of the new refrigerant

Charge_N is the pounds of refrigerant charge of the new refrigerant

Leakage_N is the estimated future annual leak rate (as documented in application materials)

2204.6 is a standard conversion factor from pounds to metric tons

Questions for Stakeholders

- ▶ Are there additional evaluation metrics we should consider?
- ▶ Is 60 days sufficient time to submit an application?
- ▶ Are the GWP categories (<10 for new systems, <1500 for retrofits) appropriate?
- ▶ How can we make the program as equitable as possible?
- ▶ How can we encourage participation from small and independent stores?
- ▶ What sort of workforce development activities should be paired with the grant awards? How can MassDEP best facilitate this?
- ▶ Are the proposed funding amounts appropriate?

Please send written feedback or questions to us at
climate.strategies@mass.gov by June 28, 2022