

EPA's Best Practices for Local Governments Disposing of Appliances

Why is it important to safely dispose of refrigerants in appliances?

Historically, ozone-depleting substances (ODS) have been used as refrigerants, foam blowing agents, and aerosol propellants. Chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) (e.g., R-22 and other refrigerants), as well as their substitutes such as hydrofluorocarbons (HFCs), are common refrigerants used in air-conditioners and refrigerators. For purposes of this document, the term “refrigerant” will be used throughout to cover ozone-depleting substances and their non-exempt substitutes.

Local governments can play an important role in the safe disposal of appliances that contain refrigerants, such as refrigerators, air conditioners, and dehumidifiers. If released to the air, the refrigerants in these appliances can deplete ozone in the upper atmosphere. The ozone

layer protects us from ultraviolet (UV) radiation from the sun. When ozone-depleting substances are released to the air, UV radiation breaks them apart, releasing chlorine atoms which thin the ozone layer and allow more UV radiation to reach the Earth's surface. Significant exposure to UV radiation can lead to harmful human health effects such as higher skin cancer rates, cataracts, and weakened immune systems.

To prevent release of refrigerants from appliances, EPA has established requirements for the proper handling of refrigerant-containing appliances. Proper disposal of refrigerants in appliances is an important way to prevent the release of ozone-depleting substances. Many refrigerants are also potent greenhouse gases that contribute to climate change.

Examples of appliances that contain refrigerant and are collected for disposal include:

- air conditioners (motor vehicle air conditioners included)
- refrigerators
- freezers
- dehumidifiers
- drinking water coolers
- vending machines
- packaged terminal air conditioners (e.g., the self-contained heating and AC system found in some hotels and motels)
- under-the-counter ice makers

What are the Clean Air Act regulatory requirements?

EPA regulations (40 CFR Part 82, Subpart F) under Section 608 of the Clean Air Act (CAA) address the proper procedures for the safe disposal of appliances that use refrigerants. Appliances that use refrigerants are subject to EPA's safe disposal requirements, which require the recovery of refrigerant prior to disposal of an appliance to avoid releasing refrigerants into the air.

Knowingly releasing or venting refrigerants is strictly prohibited by the CAA and must be prevented during maintenance, service, repair, and disposal of refrigerant-containing equipment. Section 608 of the CAA outlines regulations that may impact safe disposal procedures for any entity (e.g., individual, organization) that is part of the disposal process, including those who are responsible for collecting appliances that contain (or contained) refrigerants. An overview of these regulatory requirements is available in the *What Local Governments Need to Know About Appliance Disposal* fact sheet available at: <https://go.usa.gov/xsfey>

Best Practices

- ✓ Become familiar with the regulatory requirements (see resources on back).
- ✓ Develop a policy for handling refrigerant-containing appliances. For example, a component of your policy could state that local governments should not crush or compact appliances containing refrigerant unless refrigerant has been properly recovered prior to crushing.
- ✓ Provide clear instructions explaining what residents must do with their appliances so that they understand their role and responsibilities in safe appliance disposal.
- ✓ Establish appliance pickup/transfer procedures that ensure the appliances awaiting disposal are not susceptible to vandalism or theft.
- ✓ Distribute brochures, flyers, literature, and engaging directly with residents.
- ✓ Include explanatory statements in materials distributed to constituents such as: “We accept refrigerant-containing appliances. Please **DO NOT** cut refrigerant lines. We will have the refrigerant properly recovered and recycled.”
- ✓ Consider the reduction and/or elimination of resident fees to encourage safe appliance disposal. If the local government charges a disposal fee, state whether the fee covers refrigerant recovery.
- ✓ Maintain a list of appliances that will be accepted by the local government.
- ✓ Provide contact information for local government staff so that residents can ask questions.
- ✓ Maintain a file of signed statements from suppliers documenting refrigerant recovery for three years.

Please also consider the use of online platforms such as e-newsletters, social media platforms, as well as presentations at town meetings to reach out to the community and share best practices.



These pictures show appliances after arrival at the scrapyard.

What happens to appliances after arrival at the scrapyard?

Refrigerant-containing appliances such as refrigerators, air conditioners, and dehumidifiers are delivered to disposal facilities for final processing. It is important that refrigerants are recovered prior to disposal.

Refrigeration lines are often made of copper. The pictures below show examples of copper refrigeration lines that have been cut. It is important for local governments to recognize signs of cut copper lines in order to raise awareness among constituents on what not to do.



Recycle Appliances the RAD Way

EPA's Responsible Appliance Disposal (RAD) Program is a voluntary partnership program that works with utilities, retailers, manufacturers, state and local government agencies, affiliates and others to dispose of old refrigerated appliances using the best environmental practices available, going beyond federal requirements for refrigerant recovery and also recovering appliance foam to protect Earth's climate and ozone layer. Use the **Find RAD Partner Programs** (<https://www.epa.gov/rad/find-rad-partner-programs>) page to find a RAD partner program near you.

Local governments can refer businesses and consumers to EPA's RAD Program, encouraging them to connect with nearby RAD partners. Most RAD partner programs will pick up old refrigerated appliances from homes, which are then sent to a recycling facility where refrigerants and other harmful environmental substances are removed. Fees for disposal can vary; for example, some municipalities may offer free scheduled pickup, retailers may charge a nominal fee for removal of an appliance when a new appliance is purchased and delivered, and some utilities may offer free trade-in programs. Some local governments go a step further and become RAD Partners or Affiliates.

More information is available at: www.epa.gov/rad/consumers

Additional Resources

What Local Governments Need to Know About Appliance Disposal:
www.epa.gov/section608/revised-608-rule-fact-sheets

40 Code of Federal Regulations Part 82, Subpart F:
go.usa.gov/xpKhq

EPA's Section 608: www.epa.gov/section608

EPA's Section 608 Safe Disposal:
www.epa.gov/section608/stationary-refrigeration-safe-disposal-requirements

Contact EPA:
go.usa.gov/xsftn

This document is intended to raise awareness of best practices that can help local governments comply with the existing Clean Air Act's Section 608 safe disposal requirements. It is NOT intended to set forth a policy on a statutory, regulatory, or technical issue, or provide an interpretation of a statute or regulation.