

DELAWARE DEPARTMENT
OF HEALTH AND SOCIAL SERVICES:



The “First State” Becomes the First State Partner in EPA’s Responsible Appliance Disposal Program

EPA’s RAD program launched in October 2006 to protect the ozone layer, cut greenhouse gas (GHG) emissions, and benefit communities. The RAD program invites utilities, retailers, manufacturers, state and local governments, universities, and other qualifying organizations to become partners. The RAD program also invites states to become RAD affiliates to promote the program to potential partners.

In 2015, the U.S. Environmental Protection Agency (EPA) welcomed the Delaware Department of Health and Social Services (DHSS) as the first state partner in EPA’s Responsible Appliance Disposal (RAD) program, a nation-wide effort to protect the ozone layer and reduce emissions of greenhouse gases (GHGs) by properly disposing of old refrigerators, air conditioners, and other refrigerant-containing appliances. These old appliances may contain chemicals—like chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs)—that have global warming potentials thousands of times stronger than carbon dioxide if leaked into the atmosphere. DHSS operates social services, senior living, and health facilities comprising of 156 buildings across the state. By partnering with RAD, DHSS has committed to collecting and disposing of old refrigerated appliances using the best environmental practices available and going beyond what is required by federal law.



EPA Mid-Atlantic Region Administrator Shawn M. Garvin welcomes DHSS as the first state partner to RAD.

“At the Delaware Department of Health and Social Services, our commitment to the people we serve includes being good environmental stewards.”

RITA LANDGRAF,
THE DHSS SECRETARY

Program Launch

The DHSS partnership began following a statewide mandate for state agencies and departments to divert more waste from landfills. Looking for ways to reduce waste, DHSS Division of Management Services Facility Operations identified a large waste stream in used heating, ventilation, and air conditioning (HVAC) appliances. In 2014, DHSS recycled 8,605 pounds of HVAC appliances, but “the processes to recover refrigerants were expensive, cumbersome, and time-consuming” explained Jarrod Fala, RAD Program Manager at DHSS. RAD offered an “efficient, next-to-zero cost solution that put us into compliance and more,” said Fala.

After deciding to join, DHSS set out to ensure facility operations personnel understood the process, their responsibilities, and the benefits of responsible appliance disposal. Additionally, coordinating among facilities operations personnel across the various sites was key to efficiently and effectively managing the refrigerated appliance waste stream. DHSS took on the responsibilities of RAD partnership in 2015.



Refrigeration units from DHSS building ready for pickup.

How it Works: Collect. Consolidate. Purge.

As a RAD partner, DHSS is responsible for collecting old HVAC equipment and ensuring that any refrigerants, waste products, and recoverable, durable materials are properly recovered and reclaimed or destroyed. When an old appliance needs to be retired and/or replaced, facilities operations or maintenance personnel transfers the old equipment to a central location operated by DHSS. After consolidating appliances at the central location, the appliances are shipped to the Appliance Recycling Centers of America’s Advanced Processing (ARCA-AP) facility in Philadelphia, Pennsylvania. ARCA is one of several companies working with RAD partners for disposing appliances. DHSS often delivers the appliances themselves—being only a short drive from the facility and offering an opportunity for employees to learn more about the processing facility and technology—or calls for a pickup by the facility for a small fee. DHSS schedules between three to five deliveries per year. RAD partners go beyond federal law to ensure insulating foam is recovered prior to the disposal of the appliance, either manually or by using an automated system.

“[We are] proud to be the first state partner in EPA’s Responsible Appliance Disposal Program.”

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ARCA-AP facility in Philadelphia, PA.

Accomplishments

All of the facilities managed by DHSS are participating in the RAD program and in its first year as a partner, DHSS met its projection of recycling 10,000 pounds of HVAC equipment. While the program initially handled small appliances, it has expanded to include larger units such as old rooftop air conditioners and chillers that were being replaced during capital improvements. In 2015, RAD partners collected and processed a total of 810,190 refrigerant-containing appliances, diverting approximately 137 million pounds of durable materials from entering landfills.

Benefits

RAD partners reduce emissions of ozone-depleting substances (ODS) and GHGs, and are publicly recognized by EPA for doing so. Avoiding emissions of refrigerants and foam blowing agents like CFCs, HCFCs, and HFCs protects the ozone layer and mitigates human impact on Earth's climate system. RAD partners also help keep communities safe by ensuring that universal waste—including mercury—as well as PCBs and used oil, are handled properly and not released into the environment. Fala emphasized the tangible benefits of the RAD partnership, as physical materials are disposed of in an environmentally responsible manner.

Joining the program also serves as a way to document efforts, voluntary commitments, or pledges to reduce GHG emissions. In addition, partners that actively encourage the permanent removal of old appliances from the electricity grid will also reduce energy demand and GHG emissions associated with electricity generation.

Looking Ahead

For 2016, DHSS estimated it would recycle about 13,000 pounds of material through RAD. In the coming years, DHSS is looking to expand its recycling efforts by allowing employees to drop off their home refrigerated appliances in order to have them recycled through the RAD program.

Lessons

For DHSS, the RAD partnership has been a success. It has provided environmental compliance and benefits that are cost-effective for taxpayers. The cost-effectiveness and simplicity of RAD allows DHSS to focus on its core mission of health and human services, while helping to protect the ozone layer, reduce GHG emissions, and provide community benefits. Fala hopes that by sharing DHSS's experience, others will consider joining RAD.

RAD Impact

In 2015, RAD partners avoided the release of 143 metric tons of ODS which otherwise would have contributed to stratospheric ozone depletion.

Reduced stratospheric ozone levels mean more exposure to ultraviolet (UV) radiation from the sun. Overexposure to UV radiation may cause melanoma and non-melanoma skin cancer, cataracts, and immune system suppression.

“One of the easiest programs I have ever been associated, with remarkable results in the first year.”

JARROD FALA,
RAD PROGRAM MANAGER AT DHSS

Additional Information

For more information about EPA's RAD program, visit <https://www.epa.gov/rad> or contact Sally Hamlin at hamlin.sally@epa.gov or 202-343-9711.

To learn more about DHSS's RAD program, contact Jarrod Fala at jarrod.fala@state.de.us.

