

ENERGY STAR Commercial Food Service Webinar Series

Spotlight on EPA's Responsible Appliance Disposal (RAD)
Program



Tuesday, November 16, 2021

Stakeholder Breakdown

- Registrations for today's webinar include:
 - Product Brand Owners
 - EEPS/Utilities
 - Other
 - Implementers
 - Dealers/Distributors
 - Associations
 - Operators



Introduction to Monthly CFS Webinar Series

Webinars are an opportunity for Partners/Stakeholders:

- ▶ To hear news on the latest CFS events, activities, and initiatives at ENERGY STAR
- ▶ To learn about program engagement resources and tips
- ▶ To engage with ENERGY STAR and each other on industry topics and energy-savings
- ▶ To provide feedback on any information gaps and inform the development of new resources



EPA's Responsible Appliance Disposal (RAD) Program



Welcome!

Background



```
graph TD; A[Background] --> B[What is RAD?]; B --> C[RAD Process]; C --> D[Why should you join?]; D --> E[What are the benefits?];
```

What is RAD?

RAD Process

Why should you join?

What are the benefits?

Background

- ▶ It is estimated that more than 13 million refrigerators/freezers are disposed of annually in the U.S.
- ▶ Federal Law requires refrigerants are recovered prior to disposal but does not require appliance foam blowing agents to be recovered
- ▶ Foam containing **ozone-depleting substances (ODS) and greenhouse gases (GHGs) (e.g., hydrofluorocarbons [HFCs])** in refrigeration units contribute to ozone depletion and climate change
- ▶ Responsible Appliance Disposal (RAD) Program encourages proper handling of appliance foam







Responsible Appliance Disposal (RAD) Program

What is RAD?

- ▶ Voluntary partnership program to dispose of old refrigerated appliances using best environmental practices available - going beyond federal requirements to protect Earth's climate and ozone layer

This means:

-  Complying with laws on the recovery of refrigerant, used oil, and PCBs
-  Recovering appliance foam
-  Promoting recycling of all durable goods
-  Promoting the permanent retirement of old, inefficient appliances to save energy



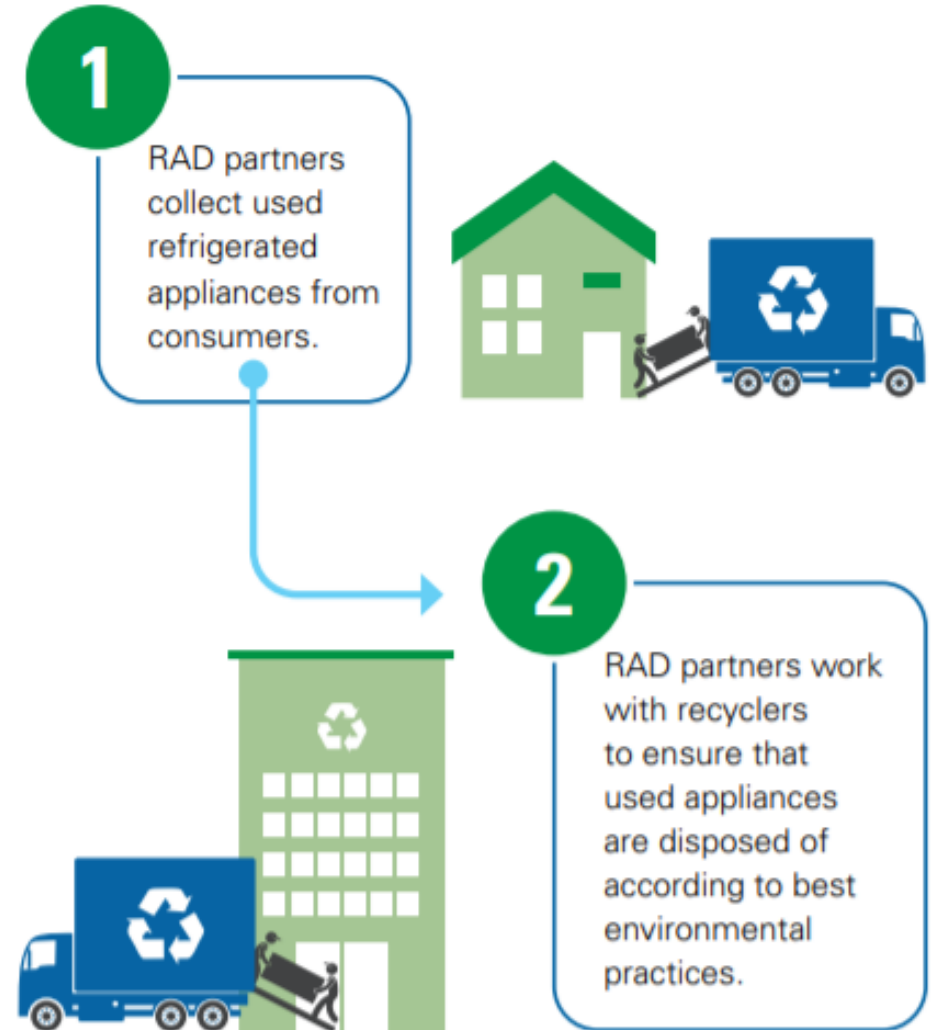
RAD Process

- ① Partners collect refrigerated appliances
 - ▶ Some offer rebates or cash for recycling



- ② Recyclers dispose of foam product at qualified destruction facilities

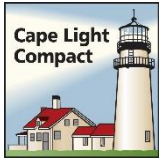
How Does RAD Work?



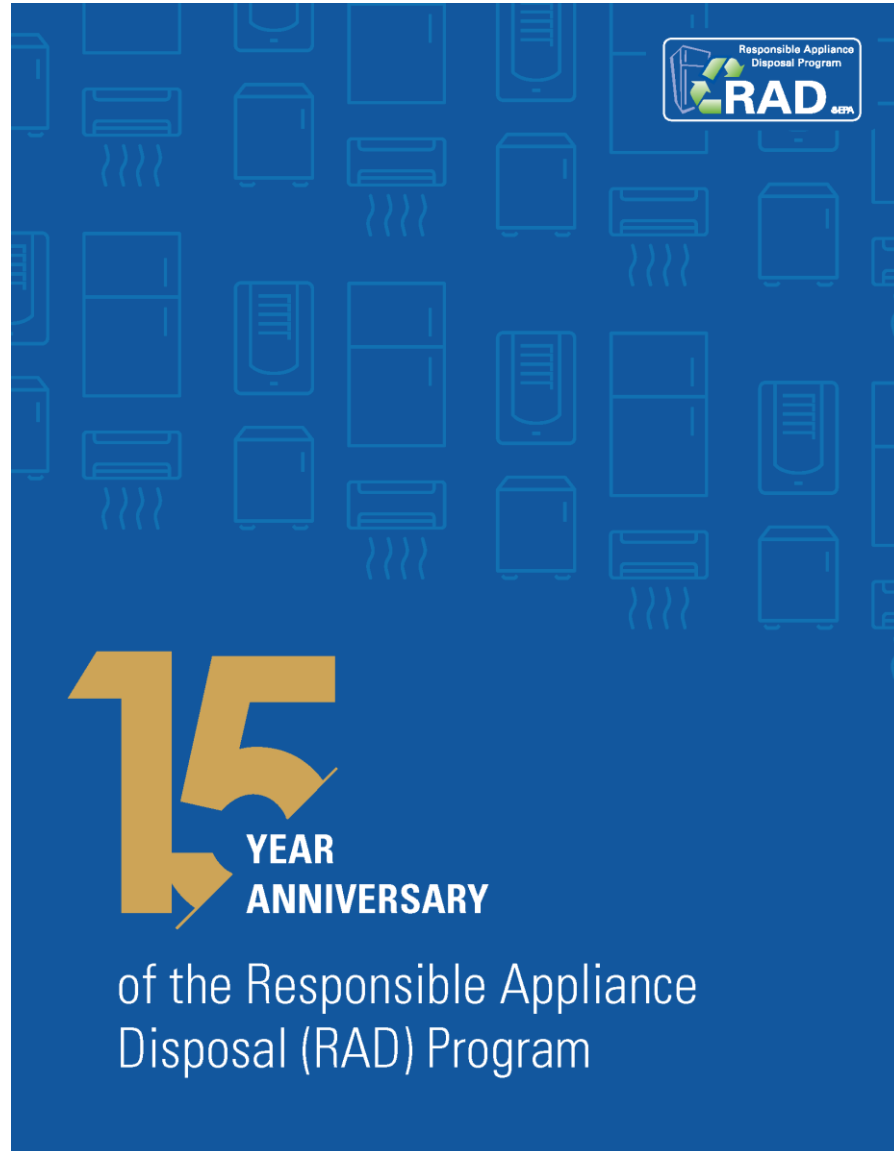
RAD Partners and Affiliates



An Exelon Company



Celebrating 15 Years of RAD



A logo for the 15th anniversary, featuring a large "15" with an arrow pointing right, followed by "YEAR ANNIVERSARY".

Benefits to RAD Partnership

Inaugural RAD Leadership Awards Program

In 2020, the RAD program launched its Leadership Awards to recognize high-achieving RAD Partners for their accomplishments in reducing emissions of ozone-depleting substances (ODS) and greenhouse gases (GHG) through insulation foam recovery. The RAD Leadership Awards Program contains three categories of recognition – RAD Champion, RAD Program Growth, and RAD Ambassador – and winners are determined based on an evaluation of both quantitative and qualitative metrics.

A gold award ribbon with a star in the center, tied with a red ribbon.

Why Join?

- ▶ RAD Partners are **publicly recognized** by EPA for:
 - Protecting the ozone layer and reducing GHG emissions
 - Saving landfill space and energy by recycling rather than landfilling durable materials
 - Keeping communities safe by avoiding the release of used oil, mercury, and PCBs

Benefits of Partnership

- ▶ **Benefits tracking** - EPA helps RAD partners calculate annual and cumulative program benefits
- ▶ **Access to EPA RAD logo**
 - Distinguish your organization as an industry leader
 - Show others how you are protecting the environment and benefiting communities
 - Communicate your environmental commitment to consumers, customers, and other target audiences
- ▶ **Annual RAD Leadership Awards** recognize high-achieving Partners for their accomplishments in reducing emissions of ODS and GHGs through insulation foam recovery

Benefits of Partnerships

► Tools and Resources

- Partner case studies
- Disposal and recycling fact sheets
- Guidance documents
- Materials communicating the benefits of RAD



Thank you for recycling your refrigerated appliance with a proud partner of EPA's Responsible Appliance Disposal (RAD) Program.

Partners of EPA's RAD Program commit to collecting and disposing of old refrigerated appliances using best environmental practices. Recycling with a RAD partner will:

- Reduce your household energy consumption, which will save you money
- Avoid the release of ozone-depleting substances (ODS) and greenhouse gases (GHGs)
- Save landfill space and energy by recycling—rather than landfilling—the metals, plastics, and glass contained in your appliance
- Avoid the release of used oil, mercury, and polychlorinated biphenyls (PCBs), which can cause adverse human health effects

Benefits Achieved by RAD (2007-2019)

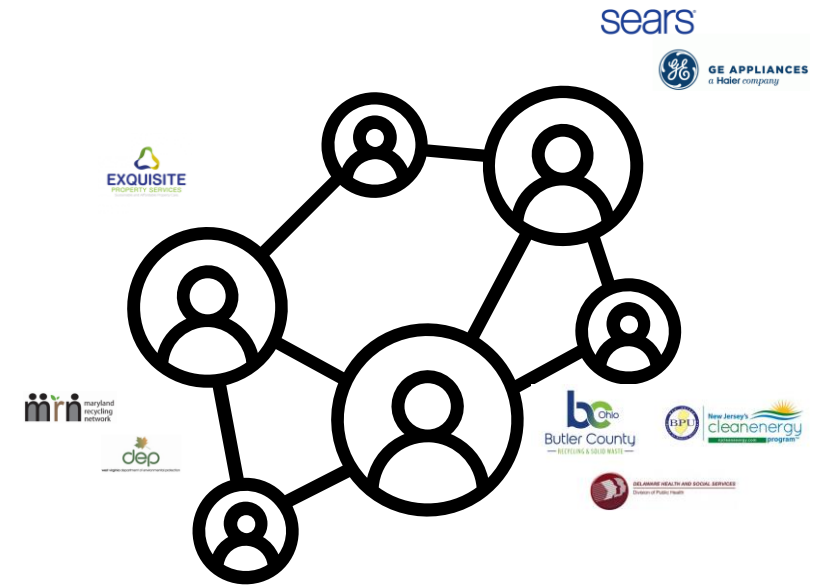


To learn more, visit: [epa.gov/rad](https://www.epa.gov/rad)

Benefits of Partnerships

► Access to National Network

- Exchange information and best practices with other partners
- Build relationships with industry peers
- Participate in partner-only webinars and meetings
- Leverage RAD partnerships to make your program more efficient and effective



RAD Leadership Awards

- ▶ RAD Leadership Awards are given in three categories of recognition:
 - The **RAD Champion Award** recognizes the top 10 Partners with the highest percentage of units collected processed with foam recovery
 - The **RAD Program Growth Award** recognizes the Partners with the greatest increase in collection rates within the last year
 - The **RAD Ambassador Award** recognizes a Partner with exemplary practices that reflect the goals of the RAD program, including launching innovative programs or campaigns that raise awareness about the importance of responsible appliance disposal
- ▶ This year's RAD Leadership Awards ceremony will take place during the Annual Partner Meeting **tomorrow, November 17 beginning at 3 pm ET**
 - **14 RAD Partners** will be receiving Leadership Awards

2020 and Cumulative RAD Partner Achievements

► In 2020 RAD Partners collected:



306,537
Refrigerators



13,255
AC Units



9,637
Dehumidifiers



39,364
Stand-alone Freezers

	2020 Benefits	Cumulative Benefits
Properly Handled Hazardous Waste	Properly disposed of:	
	25,000 Gallons of used oil	833,000 Gallons of used oil
	8,000 Mercury-containing components	216,000 Mercury-containing components
Reduced Greenhouse Gas Emissions	Achieved a reduction of:	
	1.7 Million Metric tons carbon dioxide equivalent (MTCO ₂ eq)	40.0 Million MTCO ₂ eq
Ozone Layer Protection	Avoided the release of:	
	47 Ozone Depletion Potential (ODP)-weighted tons	1,989 ODP-weighted tons
Durable Material Recycling	Recycled rather than landfilled:	
	59 Million pounds of durable material	1,524 Million pounds of durable material
Energy Savings	Reduced energy use by:	
	1.8 Billion kWh	31.3 Billion kWh

RAD partners have processed more than **9.3 million** units since program inception, resulting in environmental benefits equivalent to:



Greenhouse gas emissions from **8.7 million** passenger vehicles driven for one year



Carbon dioxide emissions from **7.3 million** homes' electricity use for one year



Carbon sequestered by **49 million acres** of U.S. forests in one year



Greenhouse gas emissions avoided by **13.6 million tons** of waste recycled instead of landfilled

Opportunities for RAD

- ▶ Recruit new Partners and Affiliates
- ▶ Increase direct consumer engagement
- ▶ Explore point-of-sale marketing materials that encourage RAD recycling and explain its benefits
- ▶ Explore retailer direct-to-consumer RAD promotion
- ▶ Investigate new program models and possible pilots



Opportunities for RAD - Commercial Refrigeration

- ▶ Commercial refrigeration equipment containing insulation foam includes:
 - Kitchen-size refrigerators and freezers
 - Refrigerated food processing and dispensing equipment (e.g., ice cream dispensers, fountain soda dispensers)
 - Ice machines
 - Vending machines
 - Stand-alone equipment (e.g., reach-in coolers, ice cream freezers)
 - Water coolers



Opportunities for RAD - Commercial Refrigeration

► Equipment collection opportunities

- Utilities/other RAD Partners can leverage existing infrastructure for residential appliance recycling programs (ARP) to incorporate commercial customers
- Potential targets
 - Standard residential-sized refrigerators and freezers used in CFS establishments collected as an extension of a residential ARP
 - Equipment vendors/contractors (e.g., vending machine distributors, refrigeration vendor/contractors)
 - Chain stores/restaurants

Thank You!

For more information:

Sally Hamlin

RAD Program Manager

Hamlin.Sally@epa.gov

(404) 213-8924

