

## WHAT IS RAD?

RAD is a voluntary partnership program that works with utilities, retailers, manufacturers, states, affiliates, and others to collect used refrigerated appliances and implement best environmental practices for the disposal of these units.

Section 608 of the Clean Air Act prohibits the release of refrigerant containing an ozone depleting substance (ODS) or substitute such as hydrofluorocarbons (HFC) during the disposal of an appliance. Federal law also requires proper management and storage of universal waste (e.g., mercury), used oil, and polychlorinated biphenyls (PCBs) prior to appliance disposal or recycling. However, federal regulations do not require the recovery of appliance foam, which contains substances that are potent greenhouse gases (GHGs) and that may, depending on the age of the appliance, deplete the ozone layer.

By complying with laws on the recovery of refrigerant, used oil, universal waste, and PCBs as well as recovering appliance foam, retiring old, inefficient appliances to save energy, and recycling durable goods, RAD partners go beyond federal requirements to protect Earth's climate and ozone layer.

As a result of their commitments, RAD partners prevent emissions that are harmful to the environment, prevent the release of hazardous substances, save landfill space through recycling, and reduce energy consumption.

## HOW DOES RAD WORK?

**1** RAD partners collect used refrigerated appliances from consumers, including refrigerators, freezers, window air conditioners, and dehumidifiers.



**2** RAD partners work with recyclers to ensure the used appliances are disposed of using best environmental practices.



Complying with laws on the recovery of refrigerant, used oil, and PCBs



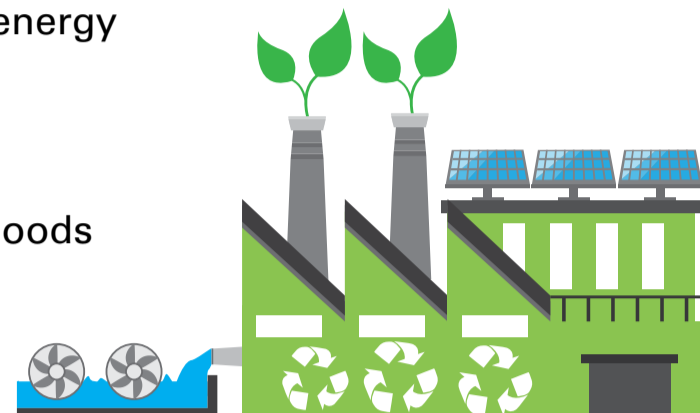
Retiring old, inefficient appliances to save energy



Recovering appliance foam



Recycling durable goods



**3** As a result of their commitments, RAD partners:



Reduce energy consumption, which saves money



Avoid the release of ODS and GHGs



Avoid the release of used oil, mercury, and PCBs that can cause adverse human health effects



Save landfill space and energy by recycling—rather than landfilling—the metals, plastics, and glass contained in appliances

## 2018 RAD RESULTS



**561,082**  
Refrigerators



**8,164**  
Dehumidifiers



**71,686**  
Stand-Alone Freezers



**17,680**  
Air Conditioners



## 2018 AND CUMULATIVE RAD BENEFITS

### Ozone Layer Protection

Avoided the release of:

2018 BENEFITS

CUMULATIVE BENEFITS

**89**

**1,877**

ozone depletion potential (ODP) weighted tons of refrigerants and foam-blowing agents



RAD partners avoid the release of refrigerants and foam-blowing agents that otherwise would contribute to stratospheric ozone depletion, which increases exposure to ultraviolet radiation and cases of skin cancer, cataracts, skin problems, and immune system suppression.

### Reduced GHG Emissions

Achieved a reduction of:

2018 BENEFITS

CUMULATIVE BENEFITS

**2.5 million**

**35.9 million**

metric tons of carbon dioxide equivalent



Since 2006, RAD partners have achieved a reduction of emissions equal to the carbon emissions associated with:

- Generating enough electricity to power 6.3 millions homes for one year
- Over 42 million acres of forests in one year—larger than the state of Washington

### Durable Material Recycling

Recycled rather than landfilled:

2018 BENEFITS

CUMULATIVE BENEFITS

**104 million**

**1,372 million**

pounds of durable materials



Since 2006, RAD partners have recycled rather than landfilled:

- 1,056 million pounds of ferrous metal (e.g., steel)
- 88 million pounds of non-ferrous metal (e.g., copper)
- 196 million pounds of plastic
- 30 million pounds of glass

### Proper Handling of Hazardous Waste

Properly disposed of:

2018 BENEFITS

CUMULATIVE BENEFITS

**50,000**  
gallons of used oil

**765,000**  
gallons of used oil

**20,000**  
PCB-containing capacitors

**319,000**  
PCB-containing capacitors

**16,000**  
mercury-containing components

**196,000**  
mercury-containing components



RAD partners properly dispose of used oil, PCB-containing capacitors, and mercury-containing components that otherwise would contribute to negative human health impacts.

### Energy Savings

Reduced energy use by:

2018 BENEFITS

CUMULATIVE BENEFITS

**2.1 billion**

**27.4 billion**

kilowatt hours



Since 2006, RAD partners have reduced energy use, translating to consumer savings of \$3.4 billion.

## PARTNERS OF RAD

In 2018, the RAD program had 43 reporting partners servicing all 50 states in the United States.

2007



2018

## WHERE IS RAD HEADED?

### More Partners

Increase the number of RAD partners and welcome new organization types to the program, including a focus on state and local government agency partners.

### More Appliances

Increase the appliance collection rate for existing partners through consumer outreach and advertising.

### More Awareness

Increase public awareness of the importance of responsible appliance disposal and the achievements of the RAD program.