

APPLIANCE DISPOSAL



APPLIANCES BY THE NUMBERS



The average American family owns a half dozen major appliances that have life spans between 10 to 18 years. United States manufacturers ship nearly 65 million major home appliances annually,

more than 249,000 appliances every day. By weight, the typical home appliance consists of about 75 percent steel and is recyclable when it has reached the end of its useful life. Scrap metal can be processed and re-melted repeatedly to manufacture new products. New steel made from scrap is equivalent in every way to that made from virgin iron ore. In fact, more than half of all steel produced in the U. S. today is made using recycled material. The same steel products can be manufactured from iron ore, recycled scrap or a combination of both, and provide identical performance.

ENVIRONMENTAL BENEFITS OF RECYCLING

Recycling steel saves energy and natural resources. In a year, the steel industry saves the equivalent energy to electrically power about 18 million households for a year. Recycling one ton of steel conserves 2,500 pounds of iron ore, 1,400 pounds of coal and 120 pounds of limestone.

www.recycle-steel.org

The U.S. Environmental Protection Agency (EPA) has identified six major benefits of using scrap instead of virgin materials (iron ore and coal) in making new steel:

- 97 percent reduction in mining wastes
- 90 percent savings in virgin materials use
- 86 percent reduction in air pollution
- 76 percent reduction in water pollution
- 74 percent savings in Energy
- 40 percent reduction in water use

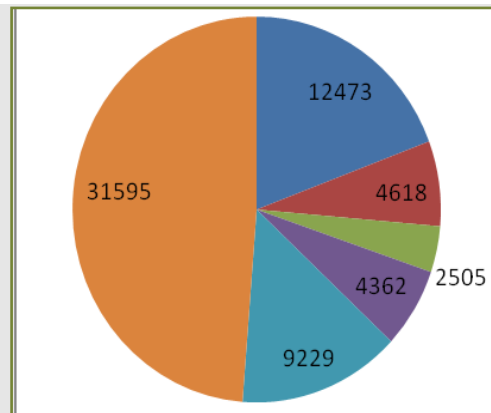
IMPACT ON THE HEALTH AND ENVIRONMENT

Household appliances may contain hazardous components. For this reason, appliances are recycled by facilities that safely remove these components prior to shredding and recycling.

- **PCBs** are a probable carcinogen and alter major systems in the body (immune, hormone, nervous and enzyme systems). They are not excreted, so the body accumulates PCBs over time. Appliances manufactured prior to 1979 may contain PCB capacitors.
- **Mercury** in products does not pose a threat until it is released. Once in the human body, mercury acts as a neurotoxin and interferes with the brain and nervous system. Some appliances manufactured prior to 2000 may have mercury-containing components (i.e., switches and relays).
- **Refrigerants** deplete the ozone, causing several human and environmental problems, such as global warming and increased skin cancer risk.
- **Used oil**, if improperly disposed, can result in groundwater contamination, and skin, eye and respiratory irritation. In the long term, it can cause cancer and damage internal organs.

Permitted appliance demanufacturers in Iowa remove and properly dispose all waste components. In 2009, Iowa permitted appliance demanufacturers removed roughly 4,618 PCB ballasts, 12,473 PCB capacitors, 4,368

HAZARDOUS COMPONENTS REMOVED



mercury thermocouples, 2,505 mercury switches, 31,595 pounds of refrigerant and 9,229 mercury-containing lamps from 166,500 appliances.

APPLIANCE DISPOSAL



HOW MUCH DOES IT COST TO RECYCLE MY OLD APPLIANCE?



The cost of appliance disposal varies. For example, your municipal public works department or city may provide a free collection or there may be a fee for this service, which may vary by appliance type. Some retailers

offer appliance pick-up and disposal service with the purchase and delivery of a new model. Depending on the retailer, a fee may be charged for this service. All appliances in Iowa must go to a permitted appliance demanufacturer to ensure these hazardous components have been removed prior to shredding.

The final disposer of appliances is responsible for making sure refrigerants, as well as other hazardous materials from the appliances, are removed and properly disposed. If the enterprise that recovers the refrigerant is not also the final disposer of the appliance, EPA requires (40 CFR 82.156(f)(2)) a signed statement containing the name and address of the person who recovered the refrigerant, and the date that the refrigerant was recovered.

Appliances simply left on the curb or on loading docks without a scheduled pick-up date are likely to be picked up by peddlers who may improperly vent refrigerant or otherwise dispose of the appliance in an unsound manner. If you learn about illegal or suspect activities (e.g., refrigerant venting), you can file a report easily and anonymously by visiting EPA's Office of Enforcement and Compliance Assurance website at www.epa.gov/compliance/complaints/index.html

OPTIONS FOR RECYCLING

- Call your local municipality to see if they have scheduled cleanup events in your area or provide curbside pickup.
- Call your local landfill to see if they collect appliances for recycling.
- When purchasing a new appliance, ask the retailer if they will take your old appliance for recycling. Don't be afraid to ask them what they do with collected appliances and what permitted demanufacturer they use.
- Some utility companies offer rebates for recycling appliances.
- View the list of permitted recycling facilities at: www.iowadnr.gov/portals/idnr/uploads/waste/adplist.pdf?amp;tabid=834

FACT

There are roughly 12,000 places to recycle out-of-service appliances across the country, including more than 80 in Iowa alone.



Further information on appliance recycling can be found at: www.iowadnr.gov/Environment/LandStewardship/WasteManagement/Recycling/Appliances.aspx