

# 5 Home appliance recycling technology

## Technology for high quality recycling that is ecologically safe

### Home appliances can be a source of pollution if handled inappropriately, but become useful resources if handled in the right way

In developing countries, small companies recover precious metal from appliance waste manually, which is a health hazard for workers and contributes to environmental pollution. Home appliances contain both hazardous substances and useful resources, such as rare metals. Treatment through sophisticated resource recovery technology produces merit in term of environmental preservation and the reuse of precious resources.

During the 1990s, the introduction of wide-ranging larger home appliances increased the burden of municipality-managed bulk waste treatment facilities in Japan. The compacting of these appliances became difficult, and the ability of such facilities to recover useful resources reached its limit, making it necessary to search for alternative methods of recycling, which led to the enactment of the Home Appliance Recycling Law in 2001. This law included the concept of Extended Producer Responsibility (EPR), in which the responsibility of the producers extended to disposal at the end of product life. Now, appliance producers, etc. are the ones recycling items specified in the law and recycling is made more efficient through a high recycling rate.

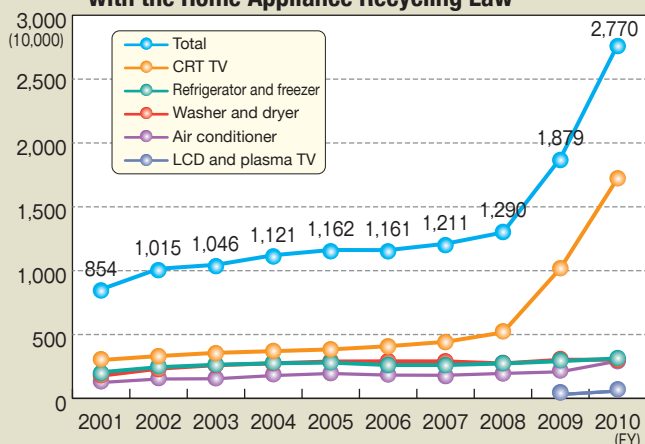


In Asian regions, electronic parts that contain hazardous lead are abandoned, causing anxiety about environmental pollution.



In developing countries, copper is recovered by open burning, creating labor hygiene problems, and air and water pollution.

#### Number of home appliances collected in accordance with the Home Appliance Recycling Law



#### Status of parts and material recycling based on the Home Appliance Recycling Law (FY2010)

(in tons)	Air conditioner	TV		Refrigerator, freezer	Washer, dryer
		Picture tube	Picture tube		
Iron	35,628	43,737	2,709	88,121	48,015
Copper	8,367	15,153	90	2,895	1,785
Aluminum	14,395	218	290	1,479	1,257
Composite of nonferrous and ferrous material	40,238	2,636	102	25,887	13,216
Glass from picture tube	—	217,846	—	—	—
Other valuable resources	14,220	94,309	2,358	41,454	29,543
<b>Total weight</b>	<b>112,848</b>	<b>373,899</b>	<b>5,549</b>	<b>159,836</b>	<b>93,816</b>

Total weight of products and material when released at cost or free of charge for parts and material recycling

#### Column

#### Home appliance recycling in Japan

The Recycling Specified kinds of Home Appliance Recycling Law stipulates that four home appliances - air conditioners, TVs, refrigerators, and washer-dryers - are to be disposed of with responsibility shared by several parties. Waste generators deliver the used appliances to retailers, who charge for disposal. The retailers take the appliances to the manufacturers, importers of the said appliances, etc., who are responsible for recycling.