# Waste Appliance Takeback Policies in Taiwan

## **Objective of the Waste Appliance Recycling Policy**

In 1998, Environmental Protection Administration Taiwan (EPAT) announced that waste televisions, refrigerators, washing machines, and air-conditioners would become regulated recyclable wastes (RRW). Initially there were no recycling industries for these home appliance products, so the waste appliances were stored in private facilities licensed by EPAT to store waste. It was not until 1999 that private recycling plants for waste electrical appliances were established.

It has been more than a decade since EPAT defined recyclable electrical appliances. Since then, the certified volume of waste appliances collected for recycling has grown to 12-18 million units per year. However, the annual percentage of home appliances collected for recycling is still below 60%, which means that nearly 50% of recyclable appliances are re-used through sale to the secondhand market or donation, disposed of inappropriately or exported. The current policy requires retailers to collect waste appliances from consumers free of charge. EPAT hopes to increase home appliance recycling rates and public awareness of home appliance recycling.

# **Evolution of the Waste Appliance Recycling Policy**

From 1997 to 2011, waste home appliance collection fees were based on the free market. When retailers delivered new appliances to households, they collected used and/or waste appliances from consumers and sold them to private recyclers and collectors. However, since it was not mandatory for retailers to collect these goods, disputes between retailers and consumers over collection fees or denial of collection services were very common.

Waste appliances are among the most bulky of the recyclable wastes regulated by EPAT. Collection of waste appliances by local administrations is nearly impossible. Therefore, EPAT relies on retailers and private collectors and recyclers to collect these goods. Home appliances are the only type of electrical

and electronic equipment (EEE) for which takeback is mandatory in Taiwan.

To determine the collection and reporting requirements for home appliance retailers, EPAT organized advisory meetings with academic experts, electrical appliance retailer associations, and retailers from across Taiwan in 2009. Regulations that defined specific responsibilities for retailers related to waste appliance collection were announced in 2010. EPAT has also given free seminars on collection of waste appliances to retailers since 2010.

## **Regulations on Waste Appliance Collection**

In December 2010, EPAT announced regulations on waste home appliance takeback. The regulations were enforced beginning July 1, 2011. Amendments were made in March 1, 2012, and became effective on April 1, 2012.

The regulations on waste appliance takeback define the following specific roles and responsibilities for consumers, retailers, private collectors, and recycling plants:

#### (1) Consumers

In order for their waste home appliances to be collected, consumers have to sign a document acknowledging their rights under the collection system, which is provided to them by the retailer. Consumers must also sign a receipt (in duplicates) that serves as proof of waste appliance collection. Consumers may report retailers' violations of these procedures to EPAT.

### (2) Retailers

The retailers are the primary target of EPAT's waste appliance takeback regulations. Retailers must give consumers a verbal explanation of their rights to the collection service and a description of the services to be provided by the retailer. These services (as defined in the regulations) are provided upon purchase of a new appliance and include collection of the waste appliance upon delivery of new appliance, checking the integrity of waste appliance, storage of the waste appliance, and tracking the downstream movement of the waste appliance.

### (3) Private collectors

Private collectors may assist retailers in collecting, transporting, and confirming the integrity of waste appliances. When receiving waste appliances for collection, collectors must report relevant product information to EPAT, including brand, type of appliance, and quantities.

### (4) Recycling plants

Recycling plants may receive waste appliances from retailers and collectors and recycle these materials in accordance with EPAT regulations. When receiving waste appliances for recycling, recyclers must report relevant product information to EPAT, including brand, type of appliance, and quantities.

## Online Reporting Tools for the Waste Home Appliance

## **Takeback System**

#### (1) Retailers

Retailers can obtain updated information on regulations and other aspects of the waste appliances collection system online at <a href="http://r-weee.epa.gov.tw">http://r-weee.epa.gov.tw</a>.

Retailers can use this system to document their collection activities for EPAT.

They can also apply for blank receipts in duplicates and check to see if signed receipts of collection and corresponding waste home appliances have been delivered to licensed recyclers.

### (2) Recyclers

Upon receiving waste home appliances, recyclers must report the receipt of collection into their online system. If the item will be sent to other recycling plants for downstream processing, the movement of the item needs to be reported. If the recycler is subsidized under the 4-in-1 Recycling Program, it must report the quantity of appliances treated to the auditing and certification group (ACG) before the waste appliances are recycled in the facility.

### (3) Auditing and certification group (ACG)

For waste appliances collected through the takeback system, an ACG has to randomly verify the inventory information provided by subsidized home appliance recyclers. The results of these inspections need to be reported online.

## **Methods for Promoting the Home Appliance Takeback**

## System

#### (1) Mail

Promotion materials are sent to retailers by post.

### (2) Guidance and instruction seminars

Seminars on home appliance collection and recycling are given to home appliance retailers and recycling industries.

#### (3) On-site workshops

For those who cannot attend the seminars, on-site workshops can be arranged. Workshops can be requested by local environmental protection bureaus, home appliance retailers, recyclers, and associations. The on-site services can be provided at local environmental protection bureaus or at home appliance retail locations.

#### (4) Takeback lucky draw

EPAT has initiated a lucky draw, rewarding consumers for waste appliance collection. Consumers who log the serial numbers of their home appliance collection receipts in the online system can join the lucky draw, which makes them eligible for a prize, such as a new appliance. This activity may encourage consumer participation in the home appliance takeback system.

# **Tracking and Auditing of Waste Appliance Recycling**

EPAT tracks and audits data entered into the online home appliance collection system in order to determine whether the recycling and movement of waste appliances is taking place in accordance with EPAT regulations. Data submitted

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by retailers, recyclers and others may be flagged based on inconsistencies in reported dates, items and quantities. EPAT officers may visit company sites for audits, and if a violation is confirmed, warning tickets would be issued to the enterprises at fault. When an enterprise accumulates tickets at frequencies or quantities that exceed legal limits, the enterprises have to pay penalties to local environmental protection bureaus.

# **Amendment and Effect of Regulations**

EPAT amended the home appliance collection regulations in April 2012 to simplify reporting requirements in the online system.

The average waste appliance collection volume for the months of April, May and June has increased from 155,926 in 2011 to 186,505 in 2012. The growth was most significant in June with an increase of 40,911 home appliances collected, which is equivalent to a 12% increase.