

Key Projects of the

Resource Recirculation Bureau

Extended Producer Responsibility

Extended Producer Responsibility (EPR) was introduced to promote the reduction, reuse and recycling of waste by encouraging manufacturers to consider the environment through the whole process of product design, manufacturing, distribution, consumption and disposal.

Prior to introducing EPR, the Wastes Deposit Program had been implemented since 1992 as a way to strengthen the role of manufacturers regarding recycling. The Wastes Deposit Program required manufacturers to make a deposit in proportion to their production output and retrieve it in the amount in proportion to their records in recycling. It was designed to encourage businesses to recycle by offering financial incentives, but the system faced criticism because companies simply paid the charge and did not make actual recycling efforts.

Under these circumstances, the Waste Deposit Program was abolished and EPR was introduced to ensure the practical efforts of businesses. After a pilot stage that began with seven items, including electronic products, between 2000 and 2002 based on a voluntary agreement between the government and industry, the full-fledged Extended Producer Responsibility system was introduced in 2003. The total amount of recycling has grown from 938,000 tons in 2002 to 1,519,000 tons in 2012, an increase of about 62%, which implies that EPR contributed to quantitative growth of the recycling sector.

At the time of the initial operation of EPR in 2003, the target items were limited to products and packaging containers such as paper packs, glass bottles, metal cans, synthetic resin packaging, batteries, tires, lubricants and electronic products, but the list of applicable items has been consistently increased.

If manufacturers subject to mandatory recycling fail to meet their targets, they should pay fees. The fees are assessed at less than 130% of the actual recycling cost per item, and vary depending on the recycling performance. If manufacturers exceed their targets, the amounts that surpassed the targets can be used for 2 years.

Since 2008, the long-term recycling targets for 5 years have been announced to help manufacturers establish recycling plans from a long-term perspective.

In addition, electric and electronic products such as TVs, refrigerators, washing machines, computers and mobile phones are designated as items subject to mandatory recovery through retail stores. In other words, the retailers of electronic and electrical products must collect the packaging of new products and the waste products of the same kind free of charge upon the purchaser's request.

Volume-based Food Waste Fee System

Recently, the Ministry of Environment has been shifting its policy direction to restrict the generation of food waste and has implemented a volume-based food waste fee system that imposes fees in proportion to the amount of food waste generated. This program expanded targets to include multi-unit dwellings in 2013, and now is nationwide

The Volume-based Waste Fee System is a policy, in accordance with the polluter pays principle, to fundamentally reduce waste generation and facilitate the separation and discharge of recyclable materials by imposing waste fees in proportion to the amount of waste generation except recycled ones. It has been enforced in Korea since 1995 and is considered to have significantly decreased the generation of residential waste.

The previous Volume-based Waste Fee System was limited to residential waste and did not charge fees for separated recyclables and food wastes in proportion to the amount. However, as the amount of food waste generated has been increasing since the direct landfill of food waste was banned in 2005, people's living standards have improved, and the number of one- or two-person households now accounts for 48% of the total households, there is an increasing need to reduce the amount of food waste. In 2012, the daily generation of food waste was about 13,209 tons, which makes up about 27% of the total amount of residential waste (48,990 tons/day).

Subsequently, the relevant ministries jointly adopted the "Comprehensive Measures for Food Waste Reduction"

in 2010 and are promoting various measures fit for the characteristics of food waste by the stage and source of generation. As part of the implementation measures, the Volume-based Food Waste Fee System was implemented.

The Volume-based Food Waste Fee System can be implemented by choosing one of three billing systems: a designated standard bag system, a chip or sticker system, or an RFID system. The standard bag system is one in which a discharger buys a standard plastic bag to dispose of food waste. The fees are collected in proportion to the amount of food waste through the cost of purchasing the bags. The chip or sticker system requires a discharger to buy a payment chip or sticker and attach it to a collection container to be picked up. The RFID system allows identification of the discharger through an electronic tag, and fees are charged according to the waste volume. Since the RFID system is the most suitable option for the objective of the volume-based fee system, the Ministry of Environment recommends this system.

As of June 2014, 142 out of 145 local governments are participating in the Volume-based Food Waste Fee System. In particular, the system was improved by correcting inconvenient details that appeared in a pilot project using an RFID system between 2010 and 2011. Based on these results, the RFID system has been expanding in earnest since 2012.



Payment chips(left), RFIDs(center), or standard bags(right) are used to charge the volume-based fee for food waste.

Free Collection for Large-scale Household Appliances Waste

The Free Collection Service for Large-scale Household Appliances Waste is a system in which a person can reserve to dispose of a bulky home appliance such as a TV, refrigerator, washing machine, etc., using the Internet or via a call center, and then a task force team visits the household to collect the item free of charge.

In the previous system, residents were required to purchase a disposal sticker (between 3,000 won and 15,000 won) from the municipal government, attach the sticker to the waste home appliance and put it outside to be collected. Moreover, as the collected items failed to be delivered to recycling centers intactly, and some core parts containing rare metals were illegally collected to be sold or exported, such problems caused severe environmental pollution and resource outflows. A survey showed that less than 5% of the collected waste home appliances were transferred to recycling centers in their original state with the previous system.

Under such circumstances, the Ministry of Environment initiated a free pick-up service for waste home appliances in Seoul as a pilot project in June 2012, and five metropolitan cities and Gyeonggi Province participated in the program in May 2013. A total of 162,000 units of waste home appliances were collected through the program in 2013. Compared to the collection performance results in 2012 under the previous system, collections in 2013 increased significantly, 1.5 to six times by each local government. If the program succeeds, it is expected to greatly contribute to achieving the national recycling target for electrical and electronic products. In addition, as the intact recovery rate of appliances improved remarkably, from below 5% to over 95%, the program is expected to contribute to the circulation of rare metals. The ministry plans to gradually expand the free pick-up service for waste electrical and electronic products nationwide starting in 2014.



Free collection service for bulky home appliances, such as refrigerator, is expected to promote recycling and recovery of rare metals.