

WASTE MANAGEMENT OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE TIMIS COUNTY

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Abstract

The paper describes how to implement waste collection system of electrical and electronic equipment (WEEE) in Timisoara, Timis county, including WEEE collection sites and dates from 2006-2009. The objectives will be presented on the Directive 2002/96/EC on the Restriction of the use of certain hazardous substances in electrical and electronic equipment, executives implementing the objectives of that Directive, the obligations of local government, initiated campaigns for WEEE collection, held in the county of Timis, and collection targets which Romania is obliged under its commitments to meet.

Key words: Waste Electrical and Electronic Equipment (WEEE), collection, obligations

JEL classification: Q56

Waste Electrical and Electronic Equipment (WEEE) means electrical and electronic equipment which is waste, which the holder discards, and all components, subassemblies and consumables as part of the equipment.

Waste electrical and electronic equipment may be:

- Household appliances - large
- Household appliances - small
- Computer and telecommunications equipment
- Consumer equipment
- Electrical and electronic tools (except large stationary industrial tools)
- Lighting equipment
- Toys, leisure and sports equipment
- Medical devices (except upon all implanted and infected products)
- Monitoring and control instruments
- Automatic dispensers.

Objectives of Directive 2002/96/EC on waste electrical and electronic equipment:

- prevention of waste electrical and electronic equipment and reuse, recycling and other forms of recovery of such wastes to reduce the amount of waste largely eliminated;
- improve the environmental performance of all operators involved in the life cycle of EEE (manufacturers, distributors and consumers) and especially economic agents directly involved in treating waste electrical and electronic equipment.

The Directive provides the measures aiming at:

- Creation of systems to provide end-holders and distributors to deliver waste electrical and electronic equipment (WEEE) to collection points;

- Ensure the collection by distributors of electrical and electronic waste electrical and electronic equipment of the same type and same amount of equipment / equipment provided;
 - Providing a selective collection rate of at least 4 kg / inhabitant and year of waste electrical and electronic equipment from private households;
 - Ensure availability and accessibility across the country, collecting the necessary points, taking particular account of population density;
 - Achieving the goals of recovery of 80% by average weight of 75% on equipment and material for recovery:
 - o Household appliances - large
 - o Automatic dispensers
 - Achieving the goals of recovery of 75% of the average weight of 65% recovery equipment and materials:
 - o Computer and telecommunications equipment
 - o Consumer equipment
 - Achieving the goals of recovery of 70% by average weight of 50% on equipment and material for recovery:
 - o Household appliances - small
 - o Lighting equipment
 - o Electrical and electronic tools (except large stationary industrial tools)
 - o Toys, sports and leisure equipment
 - o Monitoring and control instruments
 - For gas discharge lamps, material recovery rate will be 80% by weight.
- Directive 2002/96/EC implementing the objectives responsible are:
- Ministry of Environment and Forests
 - Ministry of Economy, Trade and Business Environment
 - National Environmental Protection Agency through its subordinated structures (EPAs, REPAs)
 - Local Public Administration
 - National Environmental Guard
 - National Authority for Consumer Protection
 - Electrical and electronic equipment manufacturers, distributors and consumers

In terms of WEEE collection sites the Local Public Administration is obliged to:

1. separately collect WEEE from private households
2. make available for manufacturers the necessary space for setting up collection points for their selective collecting

To ensure the success of WEEE collection sites is imperative that users should be informed about the obligation not to dispose of WEEE as unsorted municipal waste sites and to make collection of WEEE sites.

WEEE collection sites from households can be arranged in three ways:

- by handing in old equipment to store, when buying a new one
- by handing it directly to the collection point by the population
- by organizing a day per month for waste collection from the population.

According to the commitments which Romania has to meet, targets for WEEE collection sites are in the table number 1.

Table 1

Targets for WEEE collection

	2006	2007	2008
Quantities collected (target collection)	2 kg inhabitant/year	3 kg inhabitant/year	4 kg inhabitant/year

Collection points were set minimum required as follows:

- 1 at county level
- 1 in every town with inhabitants over 100.000
- 1 in every town with over 20.000 inhabitants.

In Timis specialized centers were established for WEEE collection sites, namely:

- Timisoara: 4 collection points
- Lugoj 2: collection points
- Buzias :1 collection point
- Sânnicolau Mare: 1 collection point

Initiated campaigns to collect WEEE, organized in the county Timis:

To stimulate the process of selective waste collection, the Ministry of Environment and Forests, Environmental Protection Agency Timis, the local authorities and operators of sanitation services, have organized in 2007, 2008 and 2009 campaigns for collection of waste electrical and electronic equipment.

Targets for WEEE collection campaigns

- Driving people towards selective collection of waste electrical and electronic equipment
- Involvement of central and local authorities in order to achieve environmental protection in Romania.

Results of campaigns are shown in Table 2.

Table 2.

Campaigns WEEE collection sites in Timis

	2007	2008	2009
Quantities collected (t)	38,49	82,323	58,04

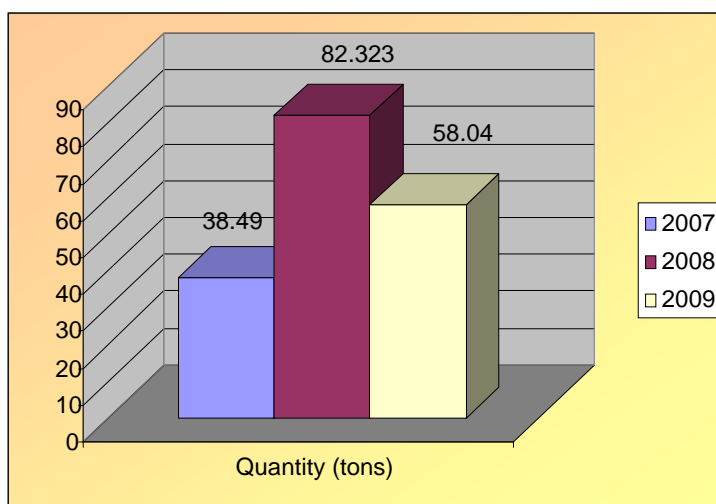


Fig. No.1 Amounts collected in the 2007-2009 campaign

In the period 2006-2009 were collected waste electrical and electronic equipment (WEEE sites) in the amount of 1649.252 tons, the largest amount was collected in 2009, which shows that after several awareness campaigns and exposure to intense population understood that these wastes can be and must be collected separately. Even so, the collection target was not achieved in neither of the years. (See table no. 3).

Table. 3

Evolution of the amount of WEEE collected in 2006-2009 reported to the target collection

	2006	2007	2008	2009
Collecting target	2	3	4	-
Collected amount	103,57 t (0,157 kg/inhabitant)	160,907 t (0,241 kg/inhabitant)	347,035 t (0,515 kg/inhabitant)	1037,74 t (1,54 kg/inhabitant)

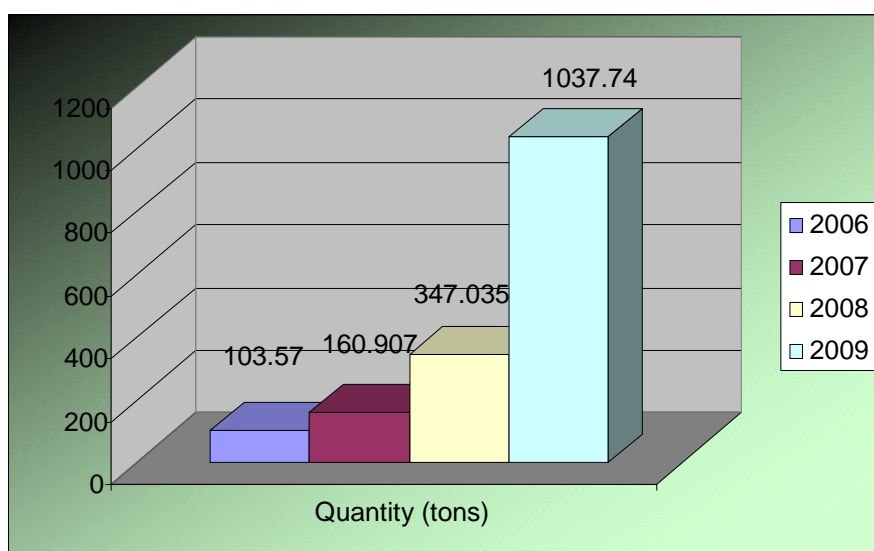


Fig. no. 2 Evolution of the quantity of WEEE collected at sites 2006-2009

In terms of data reporting, the responsibilities of local public authorities, producers, collective organizations, economic operators are:

- Manufacturers or approved collective organizations are required to keep records and report to the National Environmental Protection Agency annually until April 30:
 - The amount of WEEE placed on market sites,
 - The amount of WEEE collected sites,
 - The management of WEEE collected sites.
- Local Public Administration Authorities and operators manage collection points for WEEE sites in Environmental Protection Agency reports annually until April 30:
 - The amount of WEEE collected sites,
 - The management of WEEE collected sites.
- Economic operators who treat, recycle or build sites WEEE, report on to the Environmental Protection Agency, annually, until April 30, on the quantities of WEEE taken, of which:
 - amount recoverable from processing waste (by type of materials and substances)
 - recoverable amount of waste for disposal,
 - amounts of waste processed in the country
 - quantity of waste exported for treatment in other countries.

Linked to funding, manufacturers are required to finance collection systems, treatment, recovery, usage and nonpolluting disposal of historical waste from private households deposited at collection points set up.

For equipment marketed after December 31, 2006, producers are responsible for financing the operations of waste from their products. The manufacturer may choose to fulfill this obligation either individually or participating in a collective system.

Starting by January 1, 2007, the costs of collection, treatment, usage and nonpolluting disposal of DEE sites from users, other than private households, arising from products placed on the market, are paid by manufacturers.

Conclusions

As we presented in the paper, the targets for WEEE collection it was not reached. For that, the Environment and Forests Ministry continue the campaigns for WEEE collection. The main role in campaigns is the mass media, the environments agency from Romania, the local administration. In this way the public will be aware to collect the WEEE adequate.

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