

WEEE preparing for reuse in Greece: potential and initiatives

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Abstract

This paper presents one of the core deliverable reports of the LIFE-REWEEE project, the “Mapping Electrical and Electronic Equipment (EEE) reuse and WEEE preparing for reuse practices and initiatives in Greece”. The main goal of this report was – for the first time in Greece – the development of a reliable and updated baseline regarding the current conditions on (W)EEE reuse and preparing for reuse in Greece (i.e. practices and initiatives). The study evolved into two parallel axes: i) Collection, assessment and analysis of data from reliable sources, and ii) Investigation of the impact of economic crisis in Greece on WEEE generation.

Keywords: preparing for reuse, WEEE, Greece

1. Introduction

The paper presents one of the core deliverable reports of the LIFE-REWEEE project, the “Mapping of WEEE reuse and preparing for reuse practices and initiatives”, which was conducted for first time in Greece. The objective goal of the report was the development of a reliable baseline for the assessment of:

- the measurements, which have or will be realized throughout the implementation of the LIFE-REWEEE project, and
- the design of WEEE reuse initiatives after the end of the LIFE- REWEEE project implementation.

The co-funded by the European Commission LIFE programme “Development and Demonstration of Waste Electrical & Electronic Equipment (WEEE) Prevention and Reuse Paradigms” (LIFE-REWEEE) started 2016, with ultimate aim to reduce WEEE through the implementation of prevention and preparing for reuse actions. In specific, it aims to promote and facilitate the implementation of the relevant legislation, the reliable and socially sensitive preparation for reuse in Greece, and the development and implementation of models and assessment tools of EU-wide applicability.

2. Methodology

To achieve the goals of this paper, the following methodology tools were coined: (i) desk study of all available scientific, technical and “grey” literature, as well as analysis of the accessible databases, (ii) design,

and distribution of a survey-based questionnaire for data acquisition, and (iii) implementation of an Input-Output Analysis (modified Market Supply model), for the estimation of WEEE generation in Greece, and its comparison with WEEE generation in selected countries.

More specifically, for the mapping of the WEEE reuse and preparation for reuse practices and initiatives in Greece, all available databases regarding EEE reuse and WEEE preparing for reuse in Greece were investigated. A database containing contact information about stakeholders of the EEE reuse and WEEE preparing for reuse sector, which could provide data for the elaboration of the reports was developed.

A questionnaire was developed to facilitate the collection of reliable data from stakeholders (listed in the aforementioned database). The new classification of EEE within the 6 categories set out in Directive 2012/19/EU was used:

1. Heat exchange equipment,
2. Screens, monitors, and equipment containing screens having a surface greater than 100 cm²,
3. Lamps,
4. Large equipment,
5. Small equipment, and
6. Small IT and telecommunication equipment).

The questionnaire was sent (through e-mail/fax) to over 500 recipients, but initially less than 30 responded. In order to address the stakeholders’ reluctance, authors decided to make door-to-door contacts with service sector. As a result of these efforts, 105 filled-in questionnaires were collected and analysed. The results of this analysis were embodied in the report.

3. Main results

The analysis of the questionnaires reflects in the most detailed way the characteristics and the service activities of the participating companies, as well as the view of the employees in the service sector regarding the market of second-hand EEE in Greece.

In preparation for re-use of Category 1, large repair shops (i.e. up to 20 employees) account for the largest share,

while for the other categories 2, 4, 5 and 6 (excluding of light bulbs), repairers dominate the very small repair shops (<10 employees).

In general, the availability of spare parts in Greece for all categories of electrical and electronic equipment can be described as sufficient. The availability of spare parts is determined by a wide range of different factors, i.e. the manufacturer, the durability of a product.

The analysis of the results confirms the lack of social-economy players in the reuse and preparing for reuse: Only five were identified; all of which filled -in the questionnaire.

Regarding the cost of repairing EEE, the values reported by the service companies that participated in the survey are presented in Table 1:

Table 1. Cost of repair in Greece per EEE category

Category	Cost (€)
1	60-100
2	<100
4	60-100
5	20-40
6	20-60

Overall, no economic facilitators, such as taxes, fines etc., have been implemented to encourage EEE repair in Greece. Occasionally, a restricted number of large retailers may provide a sort of discount to customers, who deliver an old electrical appliance for recycling, but no financial incentive is provided. There are individual initiatives for large-scale EEE marketing chains that offer social incentives, such as repairing (A) EEE at no cost and donating them to vulnerable social groups or social actors. In regards to attitudes and behavior of consumers, it seems that they are more receptive than they were before 2008. The deep economic crisis of the last decade (2008-2018) shifted consumers towards repairing EEE.

The aforementioned costs are indicative because the final cost of the repair depends on whether a certain spare part is required. If the spare part is readily available and therefore cost effective, the total cost is low; if the part is scarce and therefore expensive, the total repair cost is high. In any case, it is the consumer who will make the final decision for the repair.

4. Conclusions

A questionnaire survey has been conducted in Greece regarding the potential for WEEE reuse. The results indicate that for heat exchange EEE large scale companies dominate, while for the remaining EEE categories smaller scale service companies are the majority. Overall, the availability of spare parts required for EEE repairs is satisfactory. The results of the survey also reveal the fact that social economy partners are absent from the EEE reuse practices. Moreover, no financial incentives exist for the promotion of EEE reuse. Finally, the attitude of the consumers towards second hand EEE has been improved during the last decade, possible due to the financial crisis in Greece.

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