

Press Release

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Why is the majority of the waste of electronics products not reported?

Despite the fact that legislation on e-waste requires reporting only 20 % of the worldwide e-waste collected and treated is documented. 15 years after the implementation of the European WEEE Directive 35 % of the e-waste is documented as being collected and treated. The United Nations University conducted research on the economics of reporting and scavenging of e-waste. Not reporting results in a 20 % lower operational costs meaning that parties that do not report realise profits which exceed normal margins in the recycling industry.

Another finding is that scavenging of e-waste, where valuable parts like motors, compressors, hard disks, cables and printed circuit boards are taken out before it reaches recyclers, results in a yearly loss for the industry of € 170 million. On average 22 % of the e-waste volumes in Europe are scavenged, causing significant environmental damage. 2/3 of the fridges and air conditioners do not reach legitimate recyclers or are scavenged. This leads to an environmental impact which equals CO2 emissions of 6.000.000 cars annually. In addition illegal export, scavenging and mixing non-depolluted WEEE in large shredders are practices where e-waste is not depolluted and/or proper disposal of hazardous and non-hazardous fractions is not done. These practices can lead to a costs avoidance of 32 % of the operational cost for legitimate recycling.

The e-waste recyclers and researchers give a helping hand on how reporting can be improved. Creating a level-playing field by introducing mandatory standards is one of the recommendations. Furthermore they propose that recyclers are compensated for the diverted economic income due to scavenging.

Further background information

The number of electronic products that is going to waste is increasing year by year. The global amount has grown to an astonishing 44,7 million tonnes annually¹. Politicians and governments are aware of this and it is encouraging to know 2/3 of the world population is covered by some form of e-waste legislation¹.

In Europe the WEEE legislation is in place since 2003. In order to monitor how well the e-waste is collected and recycled the member states have to collect data and report annually to the European Commission. It is disappointing that after nearly 15 year on average not more than 1/3 of the e-waste is reported. The European Electronics Recyclers Association – EERA wanted to know what the reason is for this and asked the United Nations University – UNU to make an investigation. UNU was chosen because they have in depth knowledge about this subject².

The findings of the research that are presented during the International Electronics Recycling Conference – IERC 2018 give a good insight in the background of not-reporting and non-compliant recycling. The main conclusion that it is driven by avoiding costs and therewith increasing profitability

¹ Source: 2017 Global E-waste Monitor

² Report: Countering WEEE Illegal Trade (CWIT) Project - 2015

is not so surprising. But the benefit in terms of percentage of the total operational cost for recycling is beyond expectations.

The study, that was performed among 20 e-waste recycling companies with more than 30 operational plants all over Europe, started out by determining the volumes of e-waste where components and parts were already been taken out before it reached a recycling plant. This so called 'scavenging' aims for the valuables in e-waste that consists of motors, compressors, drives, printed circuit boards, cables and alike.

The biggest environmental damage caused by scavenging happens with Cooling and Freezing Appliances. More than half of the appliances is not reaching a recycling plant and of the ones that make it, 22 % do not have a compressor anymore. It means ozon depleting gases (CFC's) of more than 2/3 of the appliances in Europe are released into the environment. The **CO2 equivalent** of these gases is **8 million tonnes per year**, which equals the annual emissions of 6.000.000 cars.

For other e-waste categories the scavenging is significant as well:

- 26 % of all IT equipment,
- 22 % of all screens,
- 18 % of all small house hold appliances,
- 17 % of all large household appliances.

All the parts that are scavenged have an economic value, which is not there for the recycler. The study reveals that every year more than € 170 million is diverted from recyclers. These recyclers have contracts, mostly with take-back-systems, who manage the e-waste on behalf of the producers of e-products. Most contracts do not take the diverted economic value due to scavenging into account. EERA considers this as unfair and calls upon good procurement practices where scavenging is addressed. Because of the importance, the association decided to monitor and publish the scavenging percentages yearly.

Another effect is that scavenging frustrates the creation of legitimate³ jobs. The study estimates that at least 150 legitimate jobs are not created.

Generally reporting requirements of the amount of e-waste treated per category and the recycling and recovery rates are passed on to recyclers. For the first time the study analysed how much the costs for reporting and audits are in Europe. As point of departure the researchers looked at compliant recyclers, which means those that are certified on basis of treatment standards (WEEELabex or Cenelec). On average the reporting costs make up 20 % of the operational costs (50-60% for reporting to authorities, 30 – 35 % to take-back-systems and 10 – 20 % for auditing) and range between € 40 – 50 per tonne. So not reporting gives a cost benefit which outreaches normal margins for recycling services by far.

A hidden 'treasure' for non-reporting parties is materials that are hazardous and have to be removed (depollution) and disposed of. The avoidance of costs for depollution and proper disposal of hazardous and non-hazardous fractions average 32% of the total operational costs and vary between 25 % and 65 % of the operational costs (€ 25 - € 220 per tonne depending on product category). Illegal export, scavenging, mixing non-depolluted WEEE in large shredders, not reporting are practices that reap the financial benefits of non-compliance. There is no-way that compliant recyclers

³ Legitimate jobs is income where social securities and taxes are paid

can win such an unfair competition. Without measures investors in the industry will ask themselves: why should we be in this market?

Confidence in the e-waste market is essential to contribute to the Circular Economy. This is the reason that EERA advocates for creating the level-playing-field for e-waste treatment with the following measures:

- Procurement of services must be based on collection and treatment standards,
- Contracts must take scavenging into account,
- Improve legislation and make standards and reporting mandatory,
- Smarter enforcement, smarter controls. A certificate is the first effective check on compliance,
- Improve the knowledge of supervisors and regional/municipal authorities on risks of non-compliance and not-reporting,
- Reporting must get a higher priority and supervisors should spent more time on reports,
- Be aware that e-waste is global business. So not-reporting and non-compliance in other countries creates the opportunity that there will be operators that take the risk to reap the significant financial benefits.

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