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Electronic waste and the environment

Report
Committee on the Environment, Agriculture and Local and Regional Affairs
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Summary

Electronic waste (e-waste) refers to electronic products at the end of their useful life: computers, televisions, video recorders, stereos, copiers, fax machines, mobile phones. Although many of these electronic products can be reused, refurbished or recycled, they represent the most rapidly growing segment of the waste stream in Europe.

These electronic discards might have long-lasting effects on the environment. When improperly disposed (incinerated or landfilled instead of recycled), toxic substances like lead, cadmium or mercury (that are commonly used in mass electronic products) can contaminate the soil, water and air.

The European Union has produced two directives relating to this topic: on Waste electrical and electronic equipment (WEEE) and on the Restriction of hazardous substances (RoHS) in waste electrical and electronic equipment. They were agreed upon on 13 February 2003.

The implementation of these Directives in the European Union countries is still in a somewhat experimental stage. As such, there are number of uncertainties and unknowns. However, the progress is fast, and it is important that an efficient legislative, regulatory and organisational framework on e-waste be extended to all the Council of Europe member states at once.

A. Draft Resolution

1. Advances in technology have led to rapidly increasing sales of new electronic devices. Increasingly short lifespan of these devices - from computers to televisions and cell phones - is creating an avalanche of electronic waste (e-waste) that threatens to overwhelm the world's landfills with permanent toxic substances like lead, cadmium or mercury.

2. The environmental problems created by e-waste, which is the fastest growing waste, are often increased by the exportation of used electronics to countries without protective environmental regulations.

3. The Parliamentary Assembly recalls two Directives of the European Union on e-waste: on the restriction of hazardous substances (2002/95/EC) (RoHS Directive), and on waste electrical and electronic equipment (2002/96/EC) (WEEE Directive), introducing restrictions on the use of toxic substances in electronic devices and requiring that a proper e-waste management legislation and regulations to be developed by its members.

4. Member countries of the European Union and some major economies such as the United States, Japan, Canada, China, Australia have also been actively developing e-waste management systems along with necessary legislation.

5. The Assembly welcomes the increasing public awareness on this issue and encourages European electronic companies to increase R&D efforts with a view to develop necessary technologies in order to substitute or decrease the quantity of harmful substances used in the devices they produce as well as those used in their production processes.

6. Consequently, the Assembly invites member states to:

6.1. take legislative and regulatory measures in order to restrict the use of hazardous materials and substances in the production of electrical and electronic equipment and implement effective management systems for e-waste;

6.2. introduce fiscal incentives in favor of proper collection, recycle and dismantling of e-waste;

6.3. inform consumers, through information campaigns, in order to facilitate them to cooperate with the proper e-waste disposal rules;

6.4. develop dialogue and cooperation between the public authorities and trade associations producing, distributing and retailing electronic devices, with a view of developing an effective and efficient e-waste management system;

6.5. encourage the networking with the European Union member states and harmonizing initiatives with the EU legislation;

6.6. raise awareness on the necessity of research and development efforts on the hazardous substances used in the fabrication of electronic devices and their substitutes;

6.7. support the strict enforcement of the United Nations Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, in particular concerning the requirements on the conditions in which the e-waste treatment is done in the reception countries;

6.8. ratify, if they have not yet done so, the Ban Amendment to the Basel Convention at the earliest possible date;

6.9. raise awareness on the importance of an appropriate management of e-waste among the various players involved in producing, selling, consuming, and disposing electronic devices;

6.10. provide a platform for further pan-European developments in e-waste management systems.

7. The Assembly invites national parliaments to elaborate appropriate legislation on the management of e-waste, taking into account the European Union legal framework;

8. The Assembly invites the Congress of Local and Regional Authorities of the Council of Europe to encourage local and regional authorities to take appropriate measures in the field of the management of e-waste.

B. Explanatory memorandum by Mr Osman Coşkunoğlu, Rapporteur

Contents

I. Introduction

1. Electronic waste, or in short, e-waste is the popular name given to electronic products at the end of their useful life: computers, televisions, video recorders, stereos, copiers, fax machines, mobile phones. Although many of these electronic products can be reused, refurbished or recycled, electronic discards is a rapidly growing segment of the waste stream in the world.

2. In 2004 worldwide sales of mobile phones were around 620-650 million units and computer sales in Europe around 45 millions units. Many of these new units replaced old ones, a process that generates huge electronic discards. Indeed, in the European Union, electro-scrap is the fastest growing waste stream, growing at 3-5 % per year, which is three times faster than average waste. It is estimated that in the USA, in 2003 alone, about 70 million existing computers became obsolete, but only 7 million were recycled. Available estimates also suggest that over 100 million computers, monitors, and televisions become obsolete in the USA each year, and this number is growing. Furthermore, by 2002, more than 130 million still-working cell phones had been "retired" in the U.S. Today, about 250,000 tons of discarded but still usable cell phones sit in stockpiles in America, awaiting disposal.

3. Available data suggest that most used electronics are probably stored in garages, attics, or warehouses, with the potential to be recycled, reused, or disposed of in landfills, incinerated or recovered without any pre-treatment.

4. Disposal of used electronics poses a number of potential environmental problems. For example, concerns have been raised because toxic substances such as lead, which have well-documented adverse health effects, can potentially leach from these products, especially if disposed improperly. This allows the substances it contains, such as heavy metals and brominates flame retardants, to make their way into soil, water and air where they pose a risk to human health and cause environmental damage.

5. Serious concerns have also been raised over used electronics that are exported to countries with less stringent environmental regulations because disposal in these countries can more easily have adverse environmental and human health effects.

6. In addition to toxic substances, computers contain precious metals, such as gold, silver, and platinum, which require substantial amounts of energy and land to extract. These metals can often be extracted with less environmental impact from used electronics than from the environment. For example, computers typically contain precious metals, such as gold, silver, palladium, and platinum, as well as other useful metals like aluminium and copper. The U.S. Geological Survey reports that one metric ton of computer circuit boards contains between 40 and 800 times the concentration of gold contained in gold ore and 30 to 40 times the concentration of copper. Accordingly, 1 metric ton of computer scrap contains more gold than 17 tons of ore and much lower levels of harmful elements common to ores, such as arsenic, mercury, and sulphur.

7. The research also suggests that the energy saved by recycling and reusing used electronics is significant. The author of one report by the United Nations University states that perhaps as much as 80 percent of the energy used in the life cycle of a computer, which includes manufacturing, can be saved through refurbishment and reuse instead of producing a new unit from raw materials.

8. A proper approach to e-waste management involves all stages of the electronic equipment's lifecycle, particularly at the end-of-life stage, by encouraging the end-of-life management of the product, eco-design, and life cycle thinking. There are a number of economical, technological, organisational and logistic factors to deal with in order to develop a successful e-waste management scheme.

9. Currently, there are extensive activities around the world, especially in large economies, such as EU, USA, Japan, Canada, China, Australia. Towards developing and implementing necessary legislation, along with working e-waste management schemes.

II. Legislation and activities in the EU countries

10. The European Union has produced two directives relating to this topic: Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) and Directive 2002/95/EC on the restriction of hazardous substances (RoHS) in waste electrical and electronic equipment.[1] They were agreed upon on 13 February 2003.

11. In order to prevent the generation of hazardous waste, RoHS Directive requires the substitution of various heavy metals (lead, mercury, cadmium, and hexavalent chromium) and brominated flame retardants (polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)) in new electrical and electronic equipment put on the market from 1 July 2006. However, some tolerances were specified. Manufacturers will need to ensure that their products - and their components - comply with the provisions of the directive. If the products do not comply, they will have to be redesigned in order to continue to be sold on the European market.

12. The key aims of the WEEE Directive are to:

- Reduce WEEE disposal to landfill;
- Provide for a free producer take-back scheme for consumers of end-of-life equipment
- Improve product design with a view to both preventing WEEE and to increasing its recoverability, reusability and/or recyclability;
- Achieve targets for recovery, reuse and recycling of different classes of WEEE;
- Provide for the establishment of collection facilities and separate collection systems of WEEE from private households;
- Provide for the establishment and financing of systems for the recovery and treatment of WEEE, by producers including provisions for placing financial guarantees on new products placed on the market.

13. The WEEE Directive applies to the following categories of equipment[2]:

- large and small household appliances;
- IT and telecommunications equipment;
- consumer equipment;
- lighting equipment;
- electrical and electronic tools (with the exception of large-scale stationary industrial tools);
- toys, leisure and sports equipment;
- medical devices (with the exception of implanted and infected products);
- monitoring and control instruments;
- automatic dispensers.

14. The RoHS Directive covers the same scope as the WEEE Directive, except for medical devices and monitoring and control instruments. It also applies to electric light bulbs and luminaries in households.[3]

[1] The directives, amendments, updates, and related progress are given in: http://ec.europa.eu/environment/waste/weee_index.htm and http://europa.eu/scadplus/leg/en/lvb/l21210.htm.
[2] In order to clarify some ambiguities, a more detailed description of the scope is given in Appendix 1.
[3] ibid.

15. Several countries have been late with the transposition of the WEEE Directive and many of the countries that did create a timely transposition did so by simply translating the EU Directive, without specifying how the legislation would be applied in practice. Further secondary regulations and clarifications are thus needed.

16. The interaction and overlap with other areas of legislation, e.g. hazardous waste regulations, trans-frontier shipment regulations, health and safety related marking etc. may have delayed the process of transposition and development of national legislation.

17. A research study on the implementation of the WEEE Directive in the EU25 has been carried out by AEA Technology in association with the Regional Environmental Centre for Central and Eastern Europe on behalf of the Joint Research Centre Institute for Prospective Technological Studies. The report identifies and describes regulatory and management approaches considering WEEE at worldwide level. It outlines key trends and describes the main benefits and problems in the implementation. The report identifies opportunities for harmonization and improvement in the way the Directive is being implemented across Member States.[4]

18. Moreover, the "2008 Review of Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)," a contract notice for a public contract has been launched on 25 March 2006. The objective of the study is to complete the information needed to inform an analysis of options for review of the Directive and to provide that analysis, in particular by giving a thorough evaluation of the impacts, efficacy and efficiency of the Directive from an environmental and economic, and as far as possible, a social perspective, by analysing the management (collection, treatment) of different categories of WEEE. The information and analysis will be used as the main content of a future impact appraisal of options for review of the Directive.

i. Alternative approaches

19. ***Collective vs competitive systems.*** There are two clear generic categories of national organisation: The national collective system (monopoly) and the competitive clearing house system.

20. The collective system is a dominant national system which is responsible for collection, recycling and financing of all of WEEE within national boundaries. Those countries with established WEEE systems favour this approach. They are generally non-governmental, non-profit-making companies which are set up and owned by one or more trade associations. They are organized around product categories in order to focus on achieving maximum efficiency in their recycling operations and to identify markets for recycled material and product reuse.

21. The clearing house model is again a national framework in which multiple partners (producers, recyclers, and waste organisations) can provide services. The government ensures that there is a register of producers and defines the allocation mechanisms, and reporting and monitoring systems. The responsibilities of a central national coordination body are to determine the collection obligation of each producer and to assign this obligation to the compliance scheme action on behalf of the producer.

22. Collective systems as run in the Netherlands, Belgium and Sweden are “tried and tested” and represent the only approach that has so far been shown to work in practice. The clearing house model lacks experience and data to make good analyses and comparisons with existing collective schemes. However, a market based approach of the clearing house model provides an incentive to cut costs in order to compete.

23. ***Logistics.*** There are three primary channels for the collection of WEEE: municipal sites, retailer take-back, and producer take back. The majority of schemes have organized themselves around the municipal collection sites, which are usually free for households to use to an unlimited extent. Take-back through retailers is usually also free but can be dependent upon the purchase of a new product. The producer take-back system may apply to larger commercial equipment and operates on a new for old basis.

24. ***Visible fee.*** WEEE Directive gives the option to indicate to consumers the costs of recycling waste determined from historical data, in the form of visible fee. Various options are possible for the fee structure: actual or projected costs per product category, and cross subsidization. There is a challenge to balance administrative efficiency against the wish to relate real costs of recycling a given product to the fee charged.

[4] This report is available at http://www.jrc.es/home/pages/detail.cfm?prs=1408

ii. Key issues in implementation of WEEE Directive

25. For the countries already having WEEE management schemes in place (Belgium, Netherlands, Sweden), the adaptation of their national legislation to the Directive is relatively straightforward. The changes needed are generally of a complementary nature regarding issues like individual producer responsibility, labelling of products, financial guarantees needed in order to place a product on the market, and collection and recycling targets.

26. Those countries which do not have a WEEE culture have faced significantly greater problems in developing the required legal and operational infrastructure to meet the deadlines set out in the Directive. Many of the larger countries in this category have attempted to develop more market based approaches with multiple providers of take back services and a clearing house system, differing significantly from the collective, single compliance scheme models tried by smaller countries and have been used by those countries that have had a WEEE management schemes in place.

III. Worldwide activities

27. While major e-waste generating nations are primarily concerned with its disposal in an environmentally sound way, there are also international activities to stop its illegal trafficking.

28. While reports from regulatory agencies vary, some estimate that as much as 80 percent of old computer equipment and other electronics collected for recycling end up in landfills in developing countries in Asia, South America or Africa.

i. The United Nations and the Basel Convention

29. The Basel Convention, a United Nations treaty on the "Control of Transboundary Movements of Hazardous Wastes and their Disposal" entered into force in 1992 and is the only comprehensive world environmental agreement on hazardous and other wastes, including e-waste. It has more than 160 member parties and aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes.

30. One of the guiding principles of the Basel Convention is that, in order to minimize the threat, hazardous wastes should be dealt with as close to where they are produced as possible. Therefore, under the Convention, transboundary movements of hazardous wastes or other wastes can take place only upon prior written notification by the State of export to the competent authorities of the States of import and transit (if appropriate).

31. Each shipment of hazardous waste or other waste must be accompanied by a movement document from the point at which a transboundary movement begins to the point of disposal. Hazardous waste shipments made without such documents are illegal.

32. Each country that is a Party to the Convention is required to report information on the generation and movement of hazardous wastes. Every year, a questionnaire is sent out to member countries, requesting information on the generation, export and import of hazardous wastes covered by the Convention. This information is reviewed and compiled by the Secretariat and is presented in an annual report, which includes statistical tables and graphic representations of the data. These documents are available at www.basel.int/

33. After intensive lobbying by Greenpeace and the Basel Action Network, on 22 September 1995, the Third meeting of the Conference of the Contracting Parties to the Convention adopted the so called “Ban Amendment” which prohibits the export of hazardous waste for any reason from rich[5] to poorer countries.

34. The Basel Ban Amendment is a clear unabashed trade barrier erected for the environment, and for human rights, supported by developing countries in recognition of the present disparate economic playing fields that, if exploited, will shift pollution problems to those least able to deal with them, rather than solve them at their source.

35. The Amendment has not got enough ratifications yet[6]. So formally it is not in strict legal force for all Basel Parties. But the Parties signed the Amendment and consider it morally binding.

[5] Basel Convention Parties that are members of the EU, OECD, Liechtenstein.

36. A worldwide plan to promote the recycling of electronic waste could emerge from the upcoming and eighth meeting of the conference of the parties to the Basel Convention. The event takes place in Kenya - its first session in Africa - from November 27 to December 1, 2006. A world forum on e-waste will be convened at the meeting, with industry, environmental groups and governments participating in discussions. The outcome could be the adopting of a global strategy to address e-waste, set in the broader context of end-of-life equipment, environmentally sound management and the UN Millennium Development Goals.

ii. International NGO's

37. Basel Action Network and Greenpeace are two internationally active and effective organizations working towards preventing the hazards created by the toxic waste, in general, and e-waste, in particular.

38. **Basel Action Network (BAN).** Working at the nexus of human rights and environment, BAN confronts the issues of environmental justice at a macro level, preventing disproportionate dumping of the world's toxic waste and pollution into the poor countries. As such, BAN is a secretariat and clearinghouse based in Seattle and a global network of activists linked by internet and a common cause of overseeing the implementation of the Basel Convention.

39. BAN issued two major reports on e-waste dumping, both of which received much attention and publicity: "Exporting Harm: The High-Tech Trashing of Asia" (25 February 2002)[7], and "The Digital Dump: Exporting Re-Use and Abuse to Africa." (24 October 2005)[8]. These two reports documented that large quantities of obsolete computers, televisions, mobile phones, and other used electronic equipment exported from USA and Europe to India, Pakistan, China and to Africa for "re-use and repair" are ending up gathering dust in warehouses or being dumped and burned near residences in empty lots, roadsides and in swamps creating serious health and environmental contamination from the toxic leachate and smoke.

40. In order to try to regulate the recycling industry and to prevent e-waste collected for recycling to end up in landfills in developing countries, BAN and the Silicon Valley Toxics Coalition have developed rigorous criteria for dismantling and recycling electronic waste. Recyclers that are part of this program must agree to prevent hazardous waste from going to landfills or to developing countries, and they must agree not to use prison labor to take computers apart, once a common practice among recyclers. Recyclers who comply can then market themselves with something akin to a seal of approval. Dozens of recycling companies have made the list, which is available at the advocacy groups' Web sites, among other places.

41. One of the BAN's currently ongoing campaigns is to promote Basel Ban Amendment Ratifications globally and to prevent the weakening of this amendment.

42. **Greenpeace.** A non-profit organisation, with a presence in 40 countries across Europe, the Americas, Asia and the Pacific, Greenpeace focuses on the most crucial worldwide threats to our planet's biodiversity and environment.

43. Together with BAN, Greenpeace works to ensure an end of toxic trade to regions of the world least equipped to deal with inevitable pollution and accidents.

44. Recognising the fact that, some toxic chemicals and heavy metals in e-waste cannot be disposed of or recycled safely, Greenpeace has been putting pressure on leading electronic companies for developing non-toxic and environmental-friendly material in their products.

45. In a recent and highly publicised report,[9] Greenpeace ranked leading mobile and PC manufacturers on their global policies and practice on eliminating harmful chemicals and on taking responsibility for their products once they are discarded by consumers. The guide and the ranking is updated in every 3 months.

46. Greenpeace is an advocate of Extended Producer Responsibility (EPR) principle; in which, the responsibility of the producers is extended beyond the factory gates, to address the lifecycle issues of products – especially what happens to them at the end of their life. As such, creating economic incentives to achieve set targets for collection, re-use and recycling, manufacturers should become more aware of the

[6] As of October 2006, those EU countries who have not yet ratified the Amendment are: Greece, Ireland, Italy, Malta, and Slovenia.
[7] http://www.ban.org/E-waste/technotrashfinalcomp.pdf
[8] http://www.ban.org/Library/TheDigitalDump.pdf
[9] http://www.greenpeace.org/international/campaigns/toxics/electronics/how-the-companies-line-up

issues related to the end-of-life management of their products. Rational manufacturers would presumably try to find a way to minimise the costs associated with end-of-life management by changing the design of their products, to reduce those costs[10].

47. Greenpeace International, Friends of the Earth Europe, and The European Environmental Bureau commissioned a study to examines how far EPR laws in Europe, Japan and elsewhere are delivering improvements in products' environmental performance. This recent report[11] provides evidence based on existing EPR programmes and anticipated EPR legislation, that EPR laws – both those mandating substance bans and setting re-use/recycling targets – do indeed prompt positive product design change. In particular, individual producer responsibility policies are shown to be more effective in creating incentives for product design change, than policies requiring collective producer responsibility.

48. Greenpeace International, Friends of the Earth Europe, and The European Environmental Bureau, recently commissioned yet another report to study the implementation of Individual Producer Responsibility (IPR) in the WEEE Directive. The report[12] shows that IPR as set up in the European WEEE Directive can "make the market work for the environment". This is a key objective both of Europe's Sustainable Development Strategy and the Sixth Environment Action Programme. However, the inadequate transposition of the relevant requirements that ensure that IPR can function is likely to put this in jeopardy. The report provides some guidelines for transposition of the WEEE directives in order to avoid such pitfalls.

iii. USA

49. The United States leads the world in the production of e-waste; however, a coherent legislation and effective regulation has yet to be developed. Also, the US is the only developed country which has not ratified the Basel Convention.[13]

50. The Environmental Protection Agency (EPA) estimates that people threw away 2.5 million tons of electronic equipment, last year, about 10 percent of which was recycled. Also last year, more than 63 million computers in the United States were replaced by faster, better and most likely cheaper systems. Where does it all go is not known.

51. Six states have passed laws, most in the last two years, requiring people to recycle electronic trash: California, Maine, Maryland, Massachusetts, Minnesota and Washington – all financed by different mechanisms. The New York state legislature is expected to consider such a bill next year, having passed a narrower measure mandating recycling of cell phones that takes effect in January 2007.

52. While federal law regulates the disposal of electronics by businesses and government agencies, it does not affect individual consumers, who account for more than half the e-waste produced annually, according to the federal agency. Four e-waste bills are floating around the House and Senate: the biggest difference between them is whether consumers or manufacturers would pay for the programs.

53. There are number of computer recycling companies, but it's hard to trace what they actually do. The government does not regulate these businesses, and the Environmental Protection Agency has no certification process for recyclers.

54. In a report[14] published in November 2005, Government Accountability Office (GAO) recommended that EPA strengthen the federal role in encouraging recycling and reuse of used electronics by (1) proposing options to the Congress for overcoming the factors deterring recycling and reuse, (2) promoting wider federal agency participation in promising EPA programs, and (3) taking steps to ensure safe handling of these products if exported. EPA agreed with most of GAO's findings, but disagreed with the first and second recommendations.

[10] These are contravertial claims. Competitive Enterprise Institute, a pro-business think tank, argues that EPR does not provide the intended incentives, in a report entitled "Mandated Recycling of Electronics – A Lose-Lose-Lose Proposition" (February 2005) (http://www.cei.org/pdf/4386.pdf) .
[11] http://www.greenpeace.org/raw/content/international/press/reports/epr.pdf (September 2006)
[12] http://www.greenpeace.org/raw/content/international/press/reports/lost-in-transposition.pdf (September 2006)
[13] Signatories of the Basel Convention which have not yet ratified: Afghanistan, Haiti, USA.
[14] http://www.gao.gov/new.items/d0647.pdf

iv. Asia-Pacific Countries and Africa

55. **China.** In recent years China has witnessed a rapid growth in the dumping of electronic products and e-waste being smuggled to coastal areas.

56. China will phase out the use of toxic materials in electronic products, and increase recycling of dumped household appliances, according to a new policy released in August 2006. Before toxic materials are totally banned, customers will be informed by producers about the amount of hazardous materials in electronic products and given guides on how to dispose of them safely. To minimize e-waste pollution, the policy makes it clear that customers, retailers and producers must share the cost of handling the waste.

57. **India.** After China started clamping down on import of e-waste by banning it last year, India has emerged as the largest dumping ground of e-waste for the developed world. Although hard numbers are difficult to come by since most of the imports are illegal, close to 40,000 tons of used electronic equipments are dumped in India every month.

58. According to environmental organizations, Delhi's e-scrap yards alone employ more than 20,000 labourers who handle 20,000 tons of e-waste every year. Close to 100 percent of total e-waste processing activity in the country takes place in unorganized recycling and backyard scrap-trading outfits.

59. It is well documented by BAN, as mentioned above, that, illegal export of e-waste from the US and Europe to India and to West Africa continues.

IV. Conclusions

60. E-waste has already become a major hazardous waste problem. The unprecedented rate at which consumers are buying new electronics – the thinner laptop, the next generation iPod, the newest of the new everything – is an indication that the e-waste soon will be the most critical waste problem.

61. Safe disposal and recycling of e-waste generated by a nation is just one aspect of the problem. To deal with this problem, in order to develop the necessary legislation and regulations, the two EU directives on e-waste set a good standard for other nations, including the members of the Council of Europe.

62. The design of products and the substances used in products are the other aspect of the e-waste problem. To deal with this problem, in order to promote innovation, research and development in this area, it is important to provide incentives to the designers and producers. Hence, in developing legislation and regulations, such incentives should be provided.

63. Yet another, international aspect of the e-waste problem is, dumping it to developing countries. The health and environmental hazards created by such dumping cannot be justified by the employment it creates among the cheap labour in less developed countries. To deal with this problem, in order to ban exporting e-waste, an international pressure on those countries which have not ratified the Basel Convention and the Ban Amendment is necessary.

APPENDIX*

Scope of the WEEE and RoHS Directives

1.2. What are the criteria for determining whether a product falls under the RoHS Directive?

Nr.	Criteria for equipment considered to be covered by Directive 2002/95/EC (RoHS)	Interpretation	Examples of products outside the scope of RoHS
1	Equipment, "which is **dependent** on electric current or electromagnetic fields in order to work properly, and equipment for the generation, transfer and measurement of such currents and fields" [[RoHS Art, 3 (a)]	For the purpose of this Directive "**dependent**" means the equipment must be dependent on electric current or electromagnetic fields. In other words, electricity is the (e. g. not petrol or gas) **primary** energy. It also means that when the electric current is off, the appliance cannot fulfil its basic (primary) function. If electrical energy is used only for support or control functions this type of equipment is not covered by Directive 2002/96/EC.	- Piezo-electric ignition - Combustion engine with ignition - Petrol-driven lawnmower - Pneumatic tools - Gas cooker with electric clock - Teddy bear with battery
2	Equipment which is "designed for use with a voltage rating not exceeding 1000 Volt for alternating current and 1500 Volt for direct current" [RoHS Art. 3 (a)]		- Piezo-electric ignition (> 1500 V) - High-voltage switchgear

Nr.	Criteria for equipment considered to be covered by Directive 2002/95/EC (RoHS)	Interpretation	Examples of products outside the scope of RoHS
3	- Additionally included are electric light-bulbs and luminairies in households [RoHS Art. 2.1]		– Medical equipment – Measurement and control equipment (categories 8 and 9 of the WEEE Directive)
4	Equipment which is not covered by "specific Community waste management legislation." [ROHS Art. 2.2]		Car radios
5	Spare parts for the repair, or the reuse, of electrical and electronic equipment put on the market from 1 July 2006. [RoHS Art. 2.3]	The Directive does not apply to parts for use in equipment put on the market before 1/07/2006 with the purpose of extending its life by updating its functionalities or upgrading its capacity.	
6	Military equipment [WEEE Art. 2.3]	Military equipment is excluded from the categories of Annex IA of the WEEE Directive, and therefore not covered by the RoHS Directive.	Arms, munitions, war material

* http://ec.europa.eu/environment/waste/pdf/faq_weee.pdf

1.3. What is the criteria for determining whether a product falls under the WEEE Directive

Nr.	Criteria for equipment considered to be covered by Directive 2002/96/EC (WEEE)	Interpretation	Example of products outside the scope of WEEE
1	Equipment, "which is dependent on electric current or electromagnetic fields in order to work properly, and equipment for the generation, transfer and measurement of such currents and fields" [WEEE Art. 3 (a)]	"**Dependent**" means that the equipment needs electricity (e. g. not petrol or gas) as its **primary** energy to fulfil its basic function. It also means that when the electric current is off, the appliance cannot fulfil its basic (primary) function. If electrical energy is used only for support or control functions (e. g.) this type of equipment is <u>not</u> covered by Directive 2002/96/EC.	- Piezo-electric ignition - Combustion engine with ignition - Petrol-driven lawnmower - Pneumatic tools - Teddy bear with battery
2	Equipment which is "designed for use with a voltage rating not exceeding 1000 Volt for alternating current and 1500 Volt for direct current" [WEEE Art, 3 (a)]		- Piezo-electric ignition (> 1500 V) - High-voltage switchgear
3	Equipment which falls "under the categories set out in Annex I A" [WEEE Art 2.1 and Annex I] **Excluded from category 6**: large-scale stationary industrial tools	"Large-scale stationary industrial tools" are machines or systems, consisting of a combination of equipment, systems, finished products and/or components, each of which is designed to be used in industry only, permanently fixed and installed by professionals at a given place in an industrial machinery or in an industrial building to perform a specific task. **Not intended to be placed on the market as a single functional or commercial unit.**[1]	- Oil platforms - For commercial catering equipment there is no general exemption. Criteria is not related to the size but to whether the equipment is fixed or not.

Nr.	Criteria for equipment considered to be covered by Directive 2002/96/EC (WEEE)	Interpretation	Example of products outside the scope of WEEE
4	Equipment listed in Annex I B which "contains a list of products which fall under the categories set out in Annex IA" [WEEE Art. 2.1 and Annex I B]	At least the specific type of equipment quoted in Annex I B falls within the scope. Luminaires in households covers all types of luminaires in households	**Explicitly excluded:** - Luminaires in households - Filament lamps
5	Equipment which is <u>not</u> part of another type of equipment that does not fall within the scope of this Directive. [WEEE Art 2.1]	With reference to Directive 89/336/EEC and the Official Guidelines for the Implementation of this Directive the decision criteria are "Finished Product" or "Fixed Installation". Equipment which is **part of another type of equipment** is **not** to be considered a ***finished product***. A finished product is any device or unit of equipment that has a **direct function,** its own enclosure and - if applicable - ports and connections intended for end users. "**Direct function"** is defined as any function of a component or a finished product which fulfils the intended use specified by the manufacturer in the instructions for use for an end-user. This function can be available without further adjustment or connections other than simple ones which can be performed by any person. **If the "other type of equipment" is a fixed installation it will not fall under the scope of the WEEE Directive**. "***Fixed installation***" in the broadest sense is defined as "a combination of several equipment, systems, finished products and/or components (hereinafter called "parts") assembled and/or erected by an assembler/installer	- Fixed installations like heating plants, industrial installations - Lifts - Control and monitoring equipment used in oil and gas electronics: permanent gauges and measurement while drilling instrumentation - Frequency converters: components are covered only when they are part of a product that is covered. Inclusion or exclusion will depend on the application of these components. This should be evaluated case by case. - Car radio and other equipment

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Reporting committee: Committee on the Environment, Agriculture and Local and Regional Affairs

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Members of the Committee: Mr Walter **Schmied** (Chairman), Mr Alan **Meale** (1e Vice-Chairman), Ms Elsa Papadimitriou (2nd Vice-Chairperson), Mr Pasquale **Nessa** (3rd Vice-Chairman), Mr Ruhi **Açikgöz**, Mr Gerolf Annemans, Mr Ivo Banac, Mr Tommaso Barbato, Mr Rony Bargetze, Mr Jean-Marie Bockel, Mr Mauro Chiaruzzi, Mrs Pikria Chikhradze, Mr Valeriu Cosarciuc, Mr Osman **Coşkunoğlu**, Mr Alain **Cousin**, Mr Taulant Dedja, Mr Hubert Deittert, Mr Tomasz Dudziński (alternate: Mr Tadeusz **Wita**), Mr József Ékes, Mr Bill **Etherington**, Mr Ivàn Farkas, Mrs Catherine Fautrier, Mr Adolfo **Fernández Aguilar**, Mr Christopher Fraser (alternate: Mr Nigel **Evans**), Mr György Frunda, Ms Eva **Garcia Pastor**, Mr Peter Götz, Mr Vladimir **Grachev**, Mr Kristiin Gunnarsson, Mr Poul Henrik Hedeboe, Mr Anders G. Högmark, Mr Rafael Huseynov, Mr Stanislaw **Huskowski**, Mr Jean **Huss**, Mr Fazail Ibrahimli, Mr Ilie **Ilaşcu**, Mr Mustafa Ilicali, Mrs Fatme Ilyaz, Mr Ivan Ivanov, Mr Bjørn Jacobsen, Mr Gediminas **Jakavonis**, Mrs Danuta **Jazłowiecka**, Mrs Liana Kanelli, Mr Karen Karapetyan, Mr Victor **Kolesnikov**, Mr Miloš Kužvart, Mr Ewald Lindinger, Mr Jaroslav Lobkowicz, Mr François Loncle, Mr.Theo Maissen (alternate: Mr John **Dupraz**), Mr José Mendes Bota, Mrs Maria Manuela **de Melo**, Mr Gilbert Meyer, Mr Goran Milojević, Mr Vladimir Mokry, Mr Stefano **Morselli**, Mr Žarko Obradović, Mrs Carina Ohlsson, Mr Pieter Omtzigt, Ms Gordana Pop Lazić, Mr Ivan **Popescu**, Mr Cezar Florin Preda, Mr Jakob Presečnik, Mr Lluís Maria de Puig, Mr Jeffrey Pullicino Orlando, Mr Dario Rivolta, Mr Herman Scheer, Mr Rainder Steenblock, Mr Vilmos Szabó, Mr Kimmo Tiilikainen, Mr Nikolay Tulaev, Mr Iñaki **Txueka**, Mr Victor Tykhonov (alternate: Mr Oleksandr **Stoyan**), Mr Geert Versnick, Mr Rudolf **Vis**, Mr Klaus Wittauer, Mr G.V. Wright, Mr Mykola **Yankovsky**, Mr Blagoj **Zasov**

N.B. The names of those members present at the meeting are printed in bold.

Secretariat to the Committee: Mr Alfred Sixto, Mr Bogdan Torcătoriu and Mrs Marine Trévisan