



International Market Insight **End-of-life vehicles – EU legislation**

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Introduction

Vehicles reaching the end of their lives represent a major source of waste. Each year the disposal of cars creates between 8 and 9 million tons of waste in the European Union and this quantity is likely to increase further in the future as cars are constantly being replaced.

In view of protecting the environment, the European Union wishes to prevent waste from end of life vehicles (ELVs) and to promote the collection, re-use and recycling of ELVs and their components. For this purpose, Directive 2000/53/EC has been adopted to regulate end-of-life vehicles (hereafter the ELV Directive).

ELV waste management is a market with increasing potential where opportunities are flourishing for US companies engaged either in the manufacturing, dismantling, shredding or recycling process of a vehicle.

This report will outline the obligations for vehicle manufacturers, namely the ban on dangerous substances while producing a car and the ELV collection, treatment and recycling duties imposed by the ELV Directive.

Obligations for vehicle manufacturers in a nutshell

1. Prevention

As waste prevention is the priority objective of the Directive, it provides that vehicle manufacturers and material and equipment manufacturers must:

- reduce the use of hazardous substances when designing vehicles (Article 4(1)a);
- design and produce vehicles which facilitate the dismantling, re-use, recovery and recycling of end-of-life vehicles (Articles 4, 5, 6 ,7 and 8);
- increase the use of recycled materials in vehicle manufacture (Article 4 (2)a);
- ensure that components of vehicles placed on the market after 1 July 2003 **do not contain heavy metals:**
 - Mercury;
 - Hexavalent chromium;
 - Cadmium
 - Lead
 - Except in the applications listed in Annex II. ¹

2. Requirements for collection and treatment facilities

Systems for the collection and treatment of ELVs must be put in place in the different Member States.

¹ This list may be amended by the Council or the Commission where scientific and technical progress allow these substances to be avoided.

2.a. Producers' responsibility

According to the ELV Directive, producers should meet all, or a significant part of the costs on the collection and treatment of ELV.² Therefore producers can contract with the undertakings responsible for ELV dismantling to finance the functioning of the latter while transferring the responsibility.

US embassies in Europe can provide contacts of national operators involved in the collection and recycling of ELVs:
http://www.buyusa.gov/europe/environmental_contacts.html

2. b. Collection

Economic operators³ must set up schemes for the collection of all end-of-life vehicles and, as far as technically feasible, of waste used parts removed when passenger cars are repaired.

All vehicles must be transferred to AUTHORIZED TREATMENT FACILITIES for destruction. Treatment facilities must obtain a permit from the competent public authorities or be registered.

Certificates of destruction and free take-back from last owners are required by the ELV Directive in order to avoid illegal dumping. This means that car owners and / or the last holders of an ELV can bring their vehicles to a treatment facility free of charge.⁴

The certificates of destruction are issued to the holder and / or owner of the ELV when it is transferred to a treatment facility. Only treatment facilities, which have obtained a permit are allowed to issue such a certificate.⁵

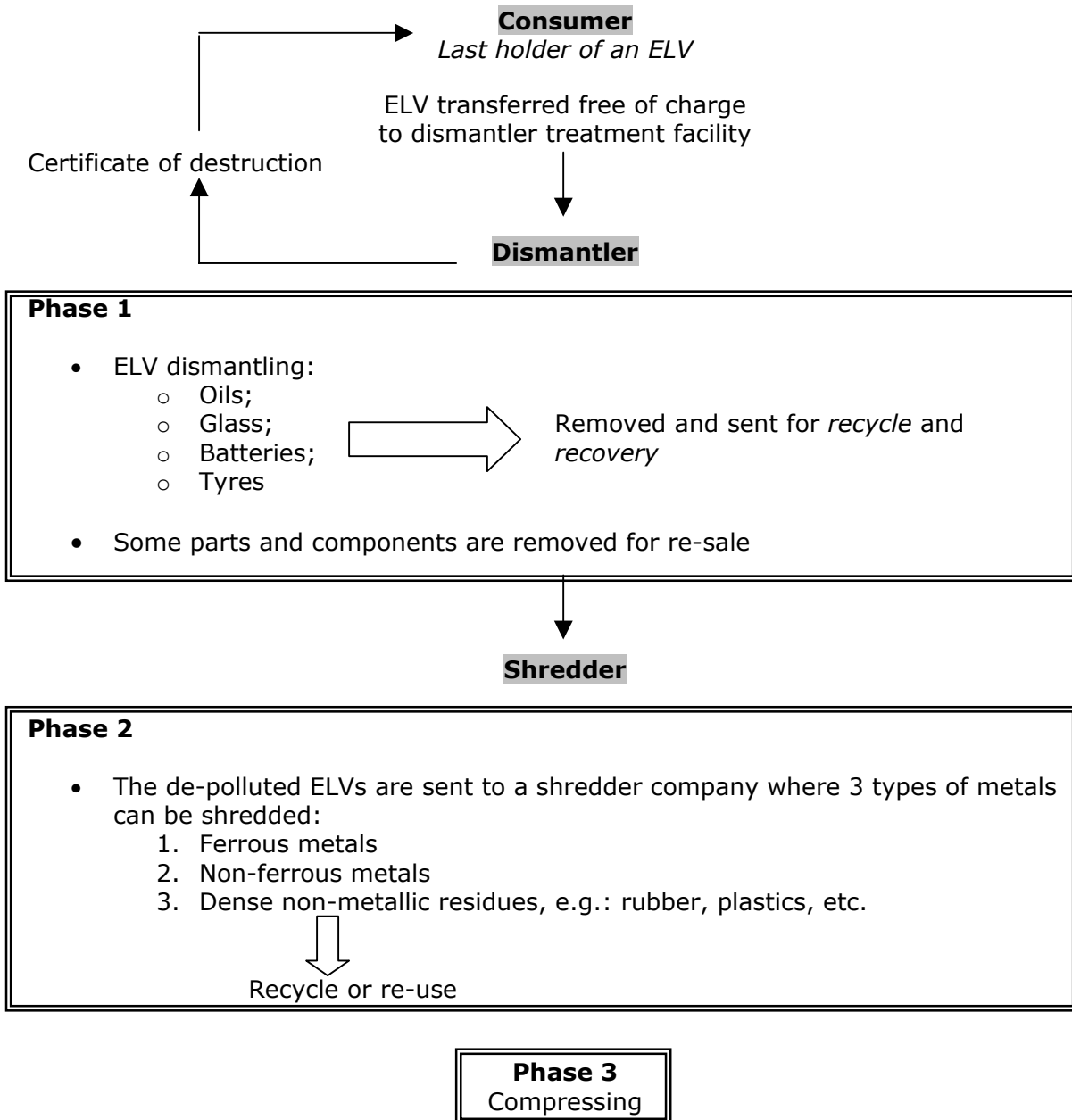
² See Annex I for the status in the EU-25

³ Means producers, distributors, collectors, motor vehicle insurance companies, dismantlers, shredders, recoverers, recyclers and other treatment operators of end-of-life vehicles, including their components and materials as defined in article 2(10) of the ELV Directive

⁴ Member States can provide that the delivery of end-of-life vehicles is not fully free of charge if the end-of-life vehicle does not contain the essential components of a vehicle, in particular the engine and the coachwork, or contains waste which has been added to the end-of-life vehicle.

⁵ Article 5(3) ELV Directive

Collection and treatment under the ELV directive



2.c. Treatment

Any establishment or undertaking carrying out treatment operations must fulfill at least the following obligations:

- a) Strip ELV before further treatment or other equivalent arrangements to reduce any adverse impact on the environment
- b) Components or materials labeled or otherwise made identifiable shall be stripped before further treatment
- c) Hazardous materials and components shall be removed and segregated in a selective way so as not to contaminate subsequent shredder waste from ELV
- d) Stripping operations and storage shall be carried out in such a way as to ensure the suitability of vehicle components for reuse and recovery, and in particular for recycling.

Annex I of the ELV Directive, sets minimum technical requirements for ELV treatment:

<p>1. Sites for storage (including temporary storage) of ELV prior to their treatment</p>	<ul style="list-style-type: none"> • Impermeable surfaces for appropriate areas with the provision of spillage collection facilities, decanters and cleanser-degreasers; • Equipment for the treatment of water, including rainwater, in compliance with health and environmental regulations.
<p>2. Sites for treatment</p>	<ul style="list-style-type: none"> • Impermeable surfaces for appropriate areas with the provision of spillage collection facilities, decanters and cleanser-degreasers; • Appropriate storage for dismantled spare parts, including impermeable storage for oil-contaminated spare parts; • Appropriate containers for storage of batteries (with electrolyte neutralization on site or elsewhere), filters and PCB/PCT – containing condensers; • Appropriate storage tanks for the segregated storage of ELV fluids: fuel, motor oil, gearbox oil, transmission oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, battery acids, air-conditioning system fluids and any other fluid contained in the ELV; • Equipment for the treatment for the treatment of water, including rainwater, in compliance with health and environmental regulations; • Appropriate storage for used tires, including the prevention of fire hazards and excessive stockpiling.
<p>3. Treatment operations for de-pollution of ELV</p>	<ul style="list-style-type: none"> • Removal of batteries and liquefied gas tanks; • Removal or neutralization of potential explosive components (e.g.: air bags) • Removal and separate collection and storage of fuel, motor oil, transmission oil, gearbox oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, air-conditioning system fluids and any other fluid contained in the ELV, unless they are necessary for the re-use of the parts concerned; • Removal, as far as feasible, of all components identified as containing mercury.
<p>4. Treatment operations in order to promote recycling</p>	<ul style="list-style-type: none"> • Removal of catalysts; • Removal of metal components containing copper, aluminium and magnesium if these metals are not segregated in the shredding process; • Removal of tires and large plastic components (bumpers, dashboard, fluid containers, etc), if these materials are not segregated in the shredding process in such a way that they can be effectively recycled as materials; • Removal of glass
<p>5. Storage operations are to be carried out avoiding damage to components containing fluids or to recoverable components and spare parts.</p>	

3. Targets for Recycling, recovery and re-use

At the moment, 75% of end-of-life vehicles are recycled (metal content). The Directive aims to increase the rate of:

- Re-use and recovery to 85% by average weight per vehicle and year by 2006, and to 95% by 2015;
- Re-use and recycling over the same period to at least 80% and 85% respectively by average weight per vehicle and year.

Less stringent objectives may be set by Member States for vehicles produced before 1980.

4. Coding standards obligation

Producers must, in concert with material and equipment manufacturers, use the nomenclature of ISO component and material coding standards for the labeling and identification of components and materials of vehicles.⁶ The purpose of this obligation is to allow a correct identification of those components and materials, in the dismantling phase, which are suitable for reuse and recovery.

For the labeling and identification of vehicle plastic components and materials having a weight of more than 100 grams, the following nomenclature applies⁷:

- ISO 1043-1 Plastics – symbols and abbreviated term. Part 1: Basic polymers and their special characteristics
- ISO 1043-2 Plastics – symbols and abbreviated terms. Part 2: Fillers and reinforcing materials
- ISO 1149 Plastics – Generic identification and marking of plastic products

For the labeling and identification of vehicle elastomer components and materials having a weight of more than 200 grams, the following nomenclature applies:

- ISO 1629 Rubbers and lattices – nomenclature. This shall not apply to the labeling of tires.

5. Scope of the Directive

To which vehicles does the End-of-Life vehicles Directive apply?

The Directive initially gives a definition of which kinds of vehicles are covered and proceeds to define what an end-of-life vehicle is.

Vehicle is defined any vehicle designated as category⁸:

- **M1**: vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat.
- **N1**: vehicles designed and constructed for the carriage of goods and having a maximum mass not exceeding 3,5 tones
- Two-or three-wheel motor vehicles, but excluding motor tricycles.

End-of-life vehicle is defined as any type of vehicle that is waste within the meaning of Directive 75/442/EEC. For the purposes of this Directive: 'waste' means any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force.

⁶ See 2003/138/EC: Commission Decision of 27 February 2003 establishing component and material coding standards for vehicles pursuant to Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles

⁷ The symbols "<" or ">" used in the ISO standards, can be substituted by bracket

⁸ As amended by Commission Directive 2001/116/EC amending Directive 70/156/EEC

Does the Directive cover ALL vehicles?

No! Vehicles designed and constructed for the carriage of:

- passengers with more than eight seats;
 - goods weighting more than 3,5 metric tones;
- } are **excluded** from the scope of the Directive

Vintage vehicles, meaning historic vehicles or vehicles of value to collectors or intended for museums, kept in a proper and environmentally sound manner, either ready for use or stripped into parts, are not covered by the definition of waste laid down by the waste Directive and do not fall within the scope of the ELV Directive.

Special purpose vehicles⁹ are excluded only from the reuse and recovery obligations provided in the ELV Directive.

Does the Directive cover spare parts?

Yes! According to Article 3 it applies to vehicles and to end-of-life vehicles, including their components and materials, and spare and replacement parts.

Does the Directive cover motor caravans, ambulances and hearses¹⁰?

Yes! Motor caravans, ambulances and hearses are category M1 **if the number of seats is less than or equal to 8**. In that case the ELV Directive covers them.

Are there special rules on certain types of vehicles covered by this Directive?

Yes. In the case of three wheeled motor vehicles, only the collection and treatment obligations apply. Member States may exempt producers that make or import only small volumes from the obligations in Article 7(4), 8 and 9 of the Directive.

Do electrical or electronic devices such as car radios come within the scope of the ELV Directive or the RoHS Directive¹¹?

The Commission considers that, when a device is not specifically designed for use in a vehicle, that device is covered by the RoHS Directive. This means that a car radio would fall under the ELV Directive.

Do car batteries fall within the scope of the ELV Directive or the Batteries Directive?

If a battery is incorporated in a vehicle, it will be collected on the basis of the ELV Directive. The car producers will pay collection. Battery producers become responsible

⁹ A vehicle of category M, N or O for conveying passengers or goods and for performing a special function for which special body arrangements and/or equipment are necessary, e.g.: motor caravans, ambulances, hearses.

¹⁰ See Directive 2001/116/EC, Annex II section A. subparagraphs 5.1., 5.3., 5.4.

¹¹ The RoHS directive (2002/95/EC) applies to the following substances:

- Lead
- Mercury
- Cadmium
- Hexavalent Chromium
- PBB
- PDBE

In order to comply with the EU ROHS legislation all of these substances must either be removed, or must be reduced to within maximum permitted concentrations, in any products containing electrical or electronic components.

for further treatment once the car battery is removed from the ELV. This means that after removal, car batteries fall under the Batteries Directive.

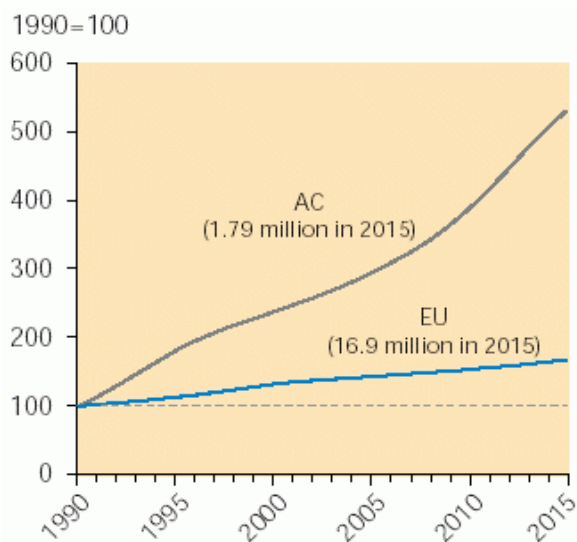
Does the ELV heavy metals ban apply to vehicles or to materials and components?

Regarding vehicles, manufacturers are only required to limit the use of hazardous substances in vehicles and to reduce them as far as possible from the conception of the vehicle onwards.¹² Regarding vehicle materials and components (and spare or replacement parts), the ban applies!¹³ The only relevant factor is the date on which the materials, components, or spare or replacement parts are put on the market (after 1 July 2003).¹⁴

Some figures

A substantial increase in the amount of scrapped cars in the new EU Member States is foreseen, due to constant replacement of passenger cars and disposal of obsolete vehicles. The number of scrapped cars is estimated to increase by 124 % between 2000 and 2015. This growth in number of scrapped cars calls for enhancement of processing technologies and facilities to ensure that scrapped cars are handled properly.

Projected number of scrapped cars in the EU (ACs = Central and Eastern Europe, EU = EU15+3, includes Iceland, Liechtenstein and Norway)



Source:
EEA-ETC/WMF, 2001.

More detailed information on the collection, dismantling, treatment and recycling of vehicles market can be obtained from the Commercial Service of U.S. Embassies: http://www.buyusa.gov/europe/environmental_contacts.html

¹² Article 4(1)a ELV Directive

¹³ Article 4(2)a ELV Directive

¹⁴ The words 'put on the market' in Article 4(2)a refer to the act of making a product available for the first time on the Community market. This happens when a product is transferred (either physical hand-over or transfer of ownership) from the producer to a distributor or final consumer.

Useful websites:

The end-of-life directive: http://europa.eu.int/eur-lex/en/consleg/pdf/2000/en_2000L0053_do_001.pdf

European Commission webpage on ELV:
http://europa.eu.int/comm/environment/waste/elv_index.htm

European associations:

European Shredder Group: <http://www.bir.org/efr2/efr-cont.htm>

European Automobile Manufacturers Organization: www.acea.be

Automotive Parts Rebuilders Association: <http://www.apra-europe.org/>

Some examples of national operators:

France

Authorized treatment centers for ELV will not be officially operational until May 24, 2006. However, the following site should have this information after that date:

http://www.federec.com/adh_list.html?s=fnda

Germany

Authorized recycling companies: <http://www.altfahrzeugstelle.de>

United Kingdom

Motor vehicles dismantlers association: www.mvda.co.uk

Consortium for automotive recycling: <http://www.caregroup.org.uk>

Sweden

Swedish car recyclers association: www.sbservice.se

Spain

Authorized dismantling and shredding centers: www.sigrauto.com

Portugal

Authorized dismantling center: <http://www.valorcar.pt/EN>

For More Information:

This report has been drafted by Margarida Matias.

The U.S. Commercial Service at the U.S. Mission to the European Union is located at Boulevard du Regent 27, Brussels B-1000, Belgium, and can be contacted via e-mail at: brussels.ec.office.box@mail.doc.gov; or visit our website: www.buyusa.gov/europeanunion.

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