Open Public Consultation on the ELV Evaluation (Directive 2000/53/EC)

Recommendations of German Advisory Council on the Environment (SRU – Sachverständigenrat für Umweltfragen)

https://www.umweltrat.de/EN/home/home_node.html

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The following are SRU recommendations on the revision of the End-of-Life Vehicles Directive 2000/53/EC with regard to the aspects:

- 1) Requirements for treatment/recycling,
- 2) Requirements for electric vehicles.

1) Requirements for treatment/recycling

a) Definition of recycling

The definition of recycling in the ELV-Directive allows to include backfilling. This was already in contrary of the recycling definition of Waste Framework Directive 2008/98/EU and is also not in line with the recycling definition of Waste Framework Directive EU 2018/851. We would like to emphasize that the recycling target should not be turned into a target for material recovery including backfilling. If there is evidence that the current recycling target cannot be reached with recycling only, the target should be amended.

b) Mass related recycling targets

Mass related recycling targets result in only those materials being recycled within the recycling rate for which the greatest economic benefit is achieved. Thus, recycling targets should be differentiated according to materials in order to encourage recycling of all or specific materials. Therefore, we propose to specify the recycling target by supplement it with a target specifically for the recycling of plastics, i.e. "20 kg of plastics per vehicle have to be separated and send to recycling" (UBA (Umweltbundesamt) 2016). Only if it can be proven that there are no pollutant-free plastics contained, there can be an exemption from this requirement.

c) Technical requirements Annex 1

In order to allow for high-grade recycling which is mentioned an aim in the Waste Framework Directive (but not further specified), the treatment requirement of Annex 1 of the ELV-Directive should be amended as follows:

- Separation of main cable harness before shredding in order to separate copper and send it to recycling;
- The former should be accompanied by the requirement that the steel fraction resulting from treatment is free of copper; this would allow for high-grade recycling of steel (Nakamura et al. 2012; Ohno et al. 2014; Nakamura et al. 2017; Ohno et al. 2017; Sander et al. 2017);
- Separation of 15 kg of electronics (based on (Kohlmeyer et al. 2015; Groke et al. 2017))
 before shredding, electronic parts should be send to WEEE-recycling plants in order to recycle the contained metals, especially also precious and scarce metals;

- Separation of parts made of Aluminium and sorting into wrought alloys and cast alloys in order to avoid that wrought alloys are downcycled to cast alloys (Nakajima et al. 2010; UNEP (United Nations Environment Programme) 2011; Løvik et al. 2014; Modaresi et al. 2014; Ortego et al. 2018); can be done after shredding if it can be proven that it leads to same result as separation before shredding; this will especially bee needed when introducing electric vehicles since these do not need that much cast alloys anymore;
- Separate parts of carbon fiber prior to shredding; this has to be accompanied by an obligatory labelling of parts made of carbon fiber (the part itself should be labelled as well as such information should be provided electronically, see d)).

d) Monitoring and separation of pollutants contained

As done in the WEEE Directive (Article 8 No. 5), an article should be introduced into the ELV-Directive that the EU COM should request the European standardisation organisations to develop European standards for the treatment, including recovery, recycling and preparing for re-use, of ELV. Those standards shall reflect the state of the art.

Further, a requirement concerning the regular assessment of pollutants contained in ELV should be introduced in the Directive. This could be implemented by the obligation to conduct batch tests regularly (e.g. once per year). How to conduct the batch tests should be specified in European standards (as for WEEE); the costs should be borne by the manufacturers. Based on the results, specific separation requirements should apply.

e) Information requirements

The obligation of vehicle manufacturers to provide information and data should be extended. Therefore, a so called "recycling pass" that manufactures have to provide should be introduced. A "recycling pass" should be required when licensing new vehicle types (all types of power trains and vehicles). This pass should provide information about raw materials used in the different parts of the vehicle, dismantling procedures, strategies/ concrete options for treatment/ recycling. This could be illustrated by e.g. an explosion drawing. To this end, a comprehensive end-of-life concept should be elaborated during product development to allow for dismantling and high-quality recycling. The recycling pass should be linked to the respective unique vehicle number.

f) Specify extended producer responsibilities

First of all, as foreseen in the Waste Framework Directive, producers should be obliged to bear the costs of the whole end-of-life management, including collection. There should not be an exemption for ELVs.

Further, producers should be obliged to make available information as described above ("recycling pass) and to finance the development of state of the art treatment and recycling technologies. Member States should be encouraged to introduce EPR schemes that allow to oblige the manufactures to contribute to these costs while maintaining independent research and development.

f) Ecodesign

Introduce recyclate input rates for production of new vehicles. First of all, this should be done for plastics.

g) Unknown whereabouts

For a high share of ELVs it is not know where they end up. It is assumed that a high share of these ELV are sooner or later subject of improper treatment and recycling with loss of valuable raw

materials and pollution of the environment. Therefore, the vehicle registration requirements have to be amended. Since used vehicles as well as ELV This maybe has to be done in different directives than the ELV Directive, e.g. Directive 1999/37/EG on the registration documents for vehicles.

Concerning deregistration, it should be mandatory to specify if this is either:

- i. Temporary or
- ii. Final.

If it is i. temporary, the deregistration should be limited to one year and require the payment of a fee as implemented in the Netherlands. If a vehicle is illegally exported or improperly treated and recycled, the last owner would have to apply over and over again for temporary deregistration and pay the fee for it. The new regulation (limited temporary deregistration + fee) means that there is no incentive anymore to deregister a vehicle and illegally export or recycle it.

If a vehicle is not temporarily deregistered, it has to be ii. finally deregistered. If doing so, the reason should have to be given. These reasons should be defined and be a closed list of reasons. Defined reasons could be:

the export as used car within the EU, verified by a re-registration in another Member State (re-registration should be link to deregistration);

the export as used car outside the EU, verified by customs documents;

the treatment and recycling, verified by a treatment certificate;

theft, verified by theft report.

2) Requirements for electric vehicles

The transition of the mobility sector will lead to the introduction of new vehicle technologies and thus in a different input into ELV treatment plants. Therefore, requirements specific for electric vehicles should be added in the ELV-Directive, e.g. (SRU (Sachverständigenrat für Umweltfragen) 2017):

- Recycling rate for lithium for lithium batteries; recycling of lithium from batteries is technically feasible but not economically, especially due to energy demand which is higher than for current primary lithium production. However, this will change when other lithium reserves have to be extracted. With view to the future supply, lithium should be recycled. The costs should be borne by the manufacturers within the framework of their producer responsibility.
- Separation and recycling requirements concerning the engine and other electronic parts should be introduced.
- Concerning Aluminium: see 1) c). Especially necessary since Al will be used as light-weight-material for vehicle bodys; these high-grade wrought alloys should not be downcycled to cast alloys. Separation requirements should be specified.

Literature

Groke, M., Kaerger, W., Sander, K. and Bergamos, M. (2017): Optimierung der Separation von Bauteilen und Materialien aus Altfahrzeugen zur Rückgewinnung kritischer Metalle (ORKAM). Dessau-Roßlau. Umweltbundesamt. UBA-Texte 02/2017.

http://www.umweltbundesamt.de/sites/default/files/medien/1/publikationen/2017-01-11_texte_02-2017_orkam_endbericht.pdf (24.07.2017).

Kohlmeyer, R., Groke, M., Sander, K. and Bergamos, M. (2015): Perspektiven der zunehmenden Fahrzeugelektronik für das Altfahrzeugrecycling. In: Thomé-Kozmiensky, K. J. andGoldmann, D. (Eds.): Recycling und Rohstoffe. Bd. 8. Neuruppin. TK Verlag Karl J. Thomé-Kozmiensky, p. 184-205.

Løvik, A. N., Modaresi, R. and Müller, D. B. (2014): Long-Term Strategies for Increased Recycling of Automotive Aluminum and Its Alloying Elements. Environmental Science & Technology 48 (8), p. 4257-4265.

Modaresi, R., Løvik, A. N. and Müller, D. B. (2014): Component- and Alloy-Specific Modeling for Evaluating Aluminum Recycling Strategies for Vehicles. JOM 66 (11), p. 2262-2271.

Nakajima, K., Takeda, O., Miki, T., Matsubae, K., Nakamura, S. and Nagasaka, T. (2010): Thermodynamic analysis of contamination by alloying elements in aluminum recycling. Environmental Science & Technology 44 (14), p. 5594-5500.

Nakamura, S., Kondo, Y., Matsubae, K., Nakajima, K., Tasaki, T. and Nagasaka, T. (2012): Quality- and Dilution Losses in the Recycling of Ferrous Materials from End-of-Life Passenger Cars: Input-Output Analysis under Explicit Consideration of Scrap Quality. Environmental Science & Technology 46 (17), p. 9266-9273.

Nakamura, S., Kondo, Y., Nakajima, K., Ohno, H. and Pauliuk, S. (2017): Quantifying Recycling and Losses of Cr and Ni in Steel Throughout Multiple Life Cycles Using MaTrace-Alloy. Environmental Science & Technology 51 (17), p. 9469-9476.

Ohno, H., Matsubae, K., Nakajima, K., Kondo, Y., Nakamura, S., Fukushima, Y. and Nagasaka, T. (2017): Optimal Recycling of Steel Scrap and Alloying Elements: Input-Output based Linear Programming Method with Its Application to End-of-Life Vehicles in Japan. Environmental Science & Technology 51 (22), p. 13086-13094.

Ohno, H., Matsubae, K., Nakajima, K., Nakamura, S. and Nagasaka, T. (2014): Unintentional Flow of Alloying Elements in Steel during Recycling of End-of-Life Vehicles. Journal of Industrial Ecology 18 (2), p. 242-253.

Ortego, A., Valero, A., Valero, A. and Iglesias, M. (2018): Downcycling in automobile recycling process: A thermodynamic assessment. Resources, Conservation and Recycling 136, p. 24-32.

Sander, K., Kohlmeyer, R., Rödig, L. and Wagner, L. (2017): Altfahrzeuge - Verwertungsquoten 2015 und Hochwertigkeit der Verwertung. In: Thomé-Kozmiensky, K. J. andGoldmann, D. (Eds.): Recycling und Rohstoffe. Bd. 10. Neuruppin. TK Verlag Karl J. Thomé-Kozmiensky, p. 305-325.

Sru (Sachverständigenrat Für Umweltfragen) (2017): Umsteuern erforderlich: Klimaschutz im Verkehrssektor. Sondergutachten. Berlin. SRU.

Uba (Umweltbundesamt) (2016): Steigerung des Kunststoffrecyclings und des Rezyklateinsatzes. Dessau-Roßlau. UBA. UBA-Position.

https://www.umweltbundesamt.de/sites/default/files/medien/377/publikationen/170601_uba_pos kunststoffrecycling dt bf.pdf (26.08.2019).

Unep (United Nations Environment Programme) (2011): Recycling Rates of Metals. A Status Report. Nairobi. United Nations Environment Programme. Report of the Working Group on the Global Metal Flows of the International Resource Panel 2.

www.resourcepanel.org/file/381/download?token=he_rldvr (26.08.2019).

Open Public Consultation on the ELV Evaluation

Fields marked with * are mandatory.

ELV Evaluation - Open Public Consultation

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Background context of the consultation

What is the Directive 2000/53/EC on end-of-life vehicles about?

Every year, millions of vehicles in Europe reach the end of their life. If end-of-life vehicles (ELV) are not managed properly, they can be a threat to the environment as well as a lost source of millions of tonnes of materials. Directive 2000/53/EC on end-of-life vehicles (ELV Directive) was adopted in 2000 to minimise the impact of end-of-life vehicles (ELVs) on the environment and to improve the environmental performance of all the economic operators involved in the life cycle of vehicles.

Why is the Commission performing a consultation?

Portuguese

<u>virective 2018/849/FU</u> obliges the Commission to evaluate it by the end of 2020. Special attention is to be given to s implementation, to the feasibility of setting targets for reporting per specific materials, and to the problem of the nd-of-life vehicles of unknown whereabouts. low will the replies to this consultation be used? our replies to this consultation will be used as part of the evaluation.
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* If you represent the private sector, please specify your area of interest / activity (you can select more than one box): Vehicle producer / manufacturer / importer Vehicle dealer Vehicle repair workshop Insurance company Dismantling sector, Authorised Treatment Facility Shredder Operator Energy recovery sector Recycling sector Other (for example, exporter / importer of used vehicles)
If other please specify:

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* Publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only your type of respondent, country of origin and contribution will be published. All other personal details (name, organisation name and size, transparency register number) will not be published.

X Public

Your personal details (name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

X agree with the personal data protection provisions

The questionnaire

In the following, you will find some questions regarding the extent of your familiarity with the subject of this consultation.

To what extent are you familiar with:

	Fully familiar	To a large extent	To some extent	Not at all	I do not know
* The ELV Directive?	0	×	0	0	0
* The transposition of the ELV Directive in your country?	0	×	0	0	0

How often do you deal with:

	Daily	Monthly	Yearly	Not at all	I do not know
* The ELV Directive?	0	0	×	0	0
* The transposition of the ELV Directive in your country?	0	0	×	0	0

In the following table you will find some statements regarding the deregistration of vehicles. To what extent do you agree with them?

In your country of residence, if you had to scrap your car:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I do not know / no opinion
* 1. You would not incur any costs	0	0	0	0	0	X

* 2. You would receive some payment that reflects the value of any components or material that can be recovered from the vehicle	0	0	0	©	•	×
* 3. There would be adequate availability of collection facilities within your region	0	0	0	0	0	×
* 4. The deregistration system established by your country is simple (i.e. not overly burdensome)		0	0	0	•	×
5. The deregistration system obliges vehicle owners to indicate one of the following three options: export, off road storage or scrapping	0	0	0	©	×	0
* 6. Certificates of destruction are always provided to the last registered owner of a vehicle which reaches the end of its life and is scrapped	0	٥	0	0	•	×
* 7. There are financial incentives (i.e. payments) that encourage vehicle owners / keepers to use authorised treatment facilities to dispose of their end of life vehicles.	0	0	0	0	×	0
8. Did you ever experience to deregister your car in country A and register the same car in country B but never received a deregistration proof from country A?	0	0	0	0	•	×

In the following there are questions regarding vehicle repair:

In your country of residence, if you repair your vehicle independently (Do It Yourself)

	Yes - for free	Yes- for a fee	No	I do not know/ no opinion
* 1. Are there facilities that accept defective parts removed from your vehicle?	0	0	0	×

* 2. Are there facilities that accept used liquids removed from your vehicle?	0	0	0	×						
An increasing number of spare parts are sold via the internet. Please indicate if spare parts purchased via the internet in your country are accompanied with the following information: The name of the dismantler who dismantled the spare part from an ELV										
The registration number of the dismantler, indicating that the dismantler is an authorised treatment facility and registered in the national registry.										
	The vehicle Identification number (VIN) of the vehicle from which the spare part was removed.									
Spare parts sold are not accompanied with any of the in										
' ✓ I do not know										
Are you aware of any problems related to the your country or region? Yes No I do not know	disposal	and treatn	ment o	of ELVs in						
If yes, please specify: 1500 character(s) maximum										
see attached like										
Are there any issues relating to the managem adequately covered by the ELV Directive?	ent of end	d-of-life ve	ehicle	s that are not						
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Other comments:										
If you wish to add further information, comments or suggestions, including examples of good or bad practice) – within the scope of this questionnaire – please feel free to do so here: 1500 character(s) maximum										
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Please upload your file The maximum file size is 1 MB Only files of the type pdf,txt,doc,docx,odt,rtf are allowed										