# Regulation on Circularity Requirements for Vehicle Design and on Management of End-of-Life Vehicles

## Comments of Environmental Action Germany (DUH)

DUH welcomes the EU's intention to ensure end-of-life vehicles (ELVs) are managed sustainably and requiring the car industry to adopt a sustainable design and production of cars as part of the Regulation on Circularity Requirements for Vehicle Design and on Management of End-of-Life Vehicles (VDEoL). With the shift to electric vehicles in the automotive sector as part of the green transition, the environmental impact of vehicles will be significantly attributed to their production and end of life phase, particularly regarding the sourcing and recovery of critical raw materials (CRM). To reduce the negative environmental impacts linked to the design, production, service life and end-of-life treatment of vehicles it is necessary to set ambitious requirements to ensure resource-efficiency during the lifecycle of vehicles. Therefore, it is laudable that requirements regarding reuse of parts and components, recycled content, better collection and improved treatment at the end of vehicles' life are targeted in the Regulation. DUH also supports the introduction of a whole life cycle perspective, looking at vehicles from design to end-of-life, across multiple potential owners and the provisions on the EPR system. It is furthermore welcomed that information requirements shall be improved through a circularity vehicle passport. Nevertheless, in DUH's view, there are important weak points in the draft. Particularly, proposed measures to promote lightweight vehicles, durability, repair and reuse fall too short. Also, measures to promote use of recycled contents in vehicles, e.g. for steel, aluminum and rare earths, improve design-for-circularity and high quality recycling are deficient. Weak point in regard to ecodesign is particularly problematic, since vehicles are excluded from the Ecodesign for Sustainable Product Regulation (ESPR).

To ensure that the initiative meets its objectives in terms of the sustainability of the automotive and recycling sectors and aligns with relevant European legislation, we would like to comment on general drawbacks of the regulatory proposal and possible loopholes from a circular economy perspective within the proposed VDEoL framework.

#### **About DUH**

Environmental Action Germany (Deutsche Umwelthilfe – DUH) is a recognized German environmental and consumer protection organization, which has been campaigning for resource conservation and consumer interests since 1975. DUH is politically independent, non-profit and it campaigns on a national and European level. It is for example renowned for its role in uncovering the Diesel Scandal and in establishing a deposit system for non-refillable beverage containers in Germany. Within its Department Circular Economy, DUH promotes waste prevention, responsible consumption and a sustainable economy. For more information, please visit: <u>www.duh.de/englisch</u>

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## **1. General Requirements**

#### a. Timeframe and Scope

While the extended scope and general objectives of the regulation can be applauded, as a whole, the presented proposal is unfit to reach these goals, since most concrete measures and their implementation are delegated to future secondary acts, thus delaying the circularity shift by five to six years. It seems preferable not to delay discussions and decisions to future legal acts, where they can already happen within this process. This applies to, for example, the setting of recycled content targets for steel and other materials, declaration formats for other materials including Critical Raw Materials or the development of Vehicle Circularity Passport criteria. This delay is particularly problematic since the proposed draft is not expected to be finalized before elections.

Concerning Art. 2 defining the scope of the legislative proposal, we demand a scope extension to all vehicles to guarantee no vehicle type is excluded from provision regarding their circularity and end-of-life treatment. It is not clear why exemptions in Art. 2 (2) – (4) have been made. This is particularly serious since vehicles have been decided to be excluded from the ESPR.

## b. Vehicle size reduction

Currently, there is a trend towards larger vehicles such as SUVs, which is highly problematic. Therefore, the design of vehicles must give more consideration to reduce the size and weight of vehicles e.g. through defined maximum sizes, obligatory targets regarding fleet size limits and an incentive system via EPR fees (e.g. Eco-modulation feed). In general, this would have considerable benefits for resource efficiency as well as other negative environmental impacts of the automotive sector.

#### c. Contradicting ambition between product regulations

This proposal for product regulation on vehicles stands in contrast to recent agreements on product regulations between EU institutions such as the Batteries Regulation. Examples are a missing declaration on the carbon footprint or the misalignment with other product passports. There also appears to be a reluctance to proactively set more specific targets for recycling efficiency and recovery of materials comparable to the ambition of the Battery Regulation (Art. 71). Provisions on recycled content targets for steel, aluminum, and rare earths are postponed to future implementing and delegated acts, while the Battery regulation already defines ambitious targets for several materials. Lastly, it needs to be mentioned that current provisions made by the Commission in the draft are likely to be even more weakened in the further political process.

## d. CO<sub>2</sub>-Footprint

With regard to the passport, we believe that there is a misalignment between the proposed circularity passport for vehicles and the one proposed under the revised Ecodesign Regulation. As currently proposed, the circularity passport does not go very far and does not require e.g. the disclosure of the CO<sub>2</sub>-footprint of vehicles or the share of renewable energy used in production. However, in the proposal, the EU Commission recognizes that the 'automotive sector is an important contributor to the use of energy and material resources by the Union, and hence to the generation of greenhouse gases'. A large proportion of climate impact of e.g. of electric vehicles occurs during production, and such a carbon footprint

approach is now being considered for all products placed on the EU market, such as buildings. The interoperability of the relevant passports and respective criteria should be ensured (especially regarding batteries or electronics).

### e. Substances of Concern

To make sure that the proposal actually diminishes environmental harm within production and end-oflife of vehicles, the way to address Substances of Concern (SoC) needs to go beyond only restricting heavy metals such as lead, mercury, cadmium and hexavalent chromium and delegating possible future restrictions to an hypothetical future REACH. The current approach is a missed chance to integrate a unique system to convey information on SoC and overlooks the issue of substances that hinder circularity beyond safety consideration.

## f. Online platforms and fulfilment service providers

The illegal imports of non-compliant spare parts and components for vehicles should also be addressed as part of the VDEoL. A major concern regarding the effectiveness and compliance with the eco-design requirements of spare parts and components for vehicles in the European market lies in the critical role of online platforms and fulfilment service providers, who must actively ensure adherence to environmental and consumer protection regulations. We therefore suggest that online platforms must check whether there is a liable actor in the EU who guarantees compliance with the eco-design requirements of spare parts and components for vehicles before sale is enabled. Furthermore, online platforms must check whether the requirements of the regulation are met before spare part and components are put online for sale. Fulfilment service providers must be subject to similar obligations. If no such checking obligations are set, massive amounts of illegal spare parts and components may be imported into the EU market.

## g. EPR obligation to non EU trading partners

Regarding the illegal export of old vehicles, the proposal introduces specific criteria, and tries to limit the export of vehicles that are deemed unsuitable for EU roads due to excessive energy consumption and safety concerns, by making "roadworthiness" a prerequisite for export. We welcome this in principle. However, as the export of roadworthy and reusable vehicles will continue to happen, the new law risks creating an unfair double regime for non-EU countries, because the exported vehicles will not be covered by the EPR fees. In other words: the EU will delegate the waste management of vehicles exported outside the EU to the receiving countries but keep the fees that were set aside to financially support that process. This puts an unfair burden on the waste management systems of receiving countries outside the EU, which may be less equipped to deal with all waste fractions of a complex product like a vehicle. Information needs to travel with the vehicle and, as part of the circularity vehicle passport, to third countries. Particularly, the fees paid by producers need to be made available for EoL-management in third countries.

## 2. Explanatory Memorandum

#### a. Legal basis

Given the context of the proposal to regulate circularity requirements and end-of-life management of vehicles, we claim to consider Article 192 of the Treaty on the Functioning of the European Union (TFEU) as the legal basis for the proposal instead of Article 114. This would allow member states to go beyond the provision in the regulation (similar to Batteries Regulation). While Article 114 TFEU is associated with the regulatory framework 3R type-approval Directive 2005/64/EC aiming to ensure the proper functioning

of the single market, the ELV Directive 2000/53/EC, which deals with end-of-life vehicles, has an environmental legal basis under Article 192 TFEU. Article 192 TFEU provides a specific framework for addressing environmental objectives, including waste management. Since the new proposal aims to regulate vehicle design and collection and treatment of vehicles at the end of their life cycle, which is closely tied to environmental considerations, using Article 192 as the legal basis aligns more appropriately with the environmental focus of the proposed regulation.

## 3. Circularity requirements concerning vehicle design (Chapter II)

In the following, DUH would like to contribute some specific statements regarding the circularity requirements under the VDEoL.

#### a. Durability

Article 31 and 32 in Chapter II, addressing circularity requirements, solely provide a warranty of removed used, remanufactured, and refurbished parts. However, a notable drawback is the absence of provisions regarding the overall durability of components. This lack of emphasis on durability represents a significant disadvantage for reuse. Durability, is a key aspect for sustainability of vehicles, parts and components because it mitigates environmental impacts from resource consumption, production and disposal through a longer lifetime. Vehicles, components and parts should be constructed in a way that they are not sensitive against specific defects or rapid wear. In addition to obligatory durability product requirements, warranty by the producer assures the customer that the vehicle, relevant parts and components will function for a certain period of time and also confirms the promise of quality. Long guarantees can therefore help to extend lifetimes of vehicles and should also be demanded for new vehicles, parts and components. However, it is important that producers should give clear preference to repair over replacement with parts and components in a warranty case. We demand that durability requirements are integrated into the VDEoL, particularly because ESPR will not cover vehicles. At least standards and assessments should be developed to better assess lifetime of vehicles and components and to identify key parameters that are important for durability.

#### Criteria for vehicles:

- The Commission should develop and mandate criteria for vehicles and parts and components that ensure a durability of 15 years.
- The Circularity Vehicle Passport (CVP) and the Internet should contain instructions for a long service life of the vehicle and the battery (e.g. for electric vehicles, instructions for low battery usage), information on necessary maintenance work, guarantee conditions and simple instructions for action in the event of typical malfunctions and maintenance work.
- Vehicle should be covered by a warranty period. For electric vehicles batteries, a residual capacity of 80 % should be guaranteed for customers at the end of warranty period. Also, newly purchased spare parts and components should have a separate warranty. Vehicles must be thoroughly checked for reparability in case of damage within the warranty period.

## b. Reparability and Reusability

Reparability and Reusability are important criteria through which the vehicle producer or component manufacturer can influence durability of their vehicles and components. Chapter II only marginally include any design provisions on reparability. Art. 4 defines the way how a vehicle should be constructed, so that it is reusable to a minimum percentage by mass, however, design for reusability and reparability requires more than that. Modular design, low requirements for specific tools and good availability and un-discriminatory pricing of wear/ spare parts and components are basic conditions for reparability and reusability.

Typical smaller repairs and maintenance work should be possible for independent repair companies as well as end- users. Producers should provide detailed information online for both target groups to facilitate repairs, e.g. through repair instructions, video trainings, troubleshooting tools, exploded drawings etc. For end users, at least simple repairs such as exchange of light bulbs or exterior mirrors should be enabled. The availability of wear/ spare parts and components is an essential prerequisite for reparability. Relevant criteria are the availability period, the procurement channel, the delivery time and the price. Wear/ spare parts and components should be available for 20 years, also including accessibility for independent repairers and (with few restrictions) end-users. Besides wear and spare parts, also software should be covered by such obligations. Software updates must be provided for the vehicle and all components at least 20 years and ensure the safe use of the vehicle without limiting its functionality. Otherwise, the source code should be published.

With regard to design to enable removal and replacement of certain parts and components defined in Art. 7, provisions should not be limited to the waste phase/end-of-life of the vehicle. All parts and components need to be removable and replaceable during use of the vehicle as well, especially for the purpose of repair. Additionally, information on removal and replacement of parts and components and materials is currently limited to waste management operators and repair and maintenance operators (Art.11 (1)). However, information on components and parts that are easy to repair should also be made available to end-users e.g. vipers or exchange of light bulbs.

As depicted in Art. 11 manufacturers shall provide repair and maintenance operators access to information on "(f) digitally coded components and parts in a vehicle, where such coding prevents their repair, maintenance or replacement in another vehicle". Part pairing could create major barriers to independent and self-repair. This allows manufacturers to control revenues from parts and maintenance. Manufacturers often argue that this practice is justified by safety and security reasons, but no strong evidence supports this argument. Part pairing is an unacceptable practice that harms the independent repair ecosystem, hinders consumer choice, extends repair times, and can lead to product obsolescence and unnecessary waste. Thus, software techniques that prevent the replacement of parts or the usage of third-party parts must be banned completely.

#### Criteria for vehicles:

- Vehicle owners should be informed via internet and manual about exchangeability and availability of spare parts and its costs.
- We support mandatory product passports using QR-codes for identification of vehicles as well as parts.
- Repair instructions for typical defects, information on replacing wear/ spare parts and components and exploded drawings must be available free of charge on the Internet (or at least accessible for all repairers) for at least 20 years after last purchasing.
- Wear/ spare parts and components should be available for at least 20 years after placing the last unit on the market; They should be available latest 2 weeks after ordering and should cost no more than an appropriate proportion in relation to the price of a new one.
- Software updates for a vehicle must be provided for at least 20 years after end of production of the vehicle and ensure the safe use of the vehicle without limiting its functionality. Otherwise, the source code should be published.

#### c. Recyclability

Recyclability is an important sustainability criterion since it contributes to reduce the use of primary resources. Therefore, recyclability must be promoted, although durability, reparability and reusability

should be prioritized. Important measures supporting recyclability are to ensure a good demountability of materials and components (e.g. though avoidance of material composites), usage of uniform materials, good labelling of materials (as proposed in Art. 12 of the proposal) and low proportions of pollutants and impurities. Recycling should always be the last option if possibility of reuse was assessed and is not possible.

With regard to the methodology for calculation and verification of the rates of recyclability of a vehicle in Art.4 (3), pyrolysis and gasification<sup>1</sup> shall not be included in the recycling quotas when it comes to plastics.

#### Criteria for vehicles:

- A disassembly instruction is available for the vehicle.
- For large-sized parts made from plastic, uniform polymers should be used. Homo-, copolymers and blends are acceptable if they do not affect recyclability.
- Vehicles should have a recyclability of at least 95 % (we understand recyclability as the share of a product that can be regained as secondary material to replace primary material (in the same product sector) after the discarded product was officially collected and treated in a regular recycling process without counting pyrolysis and gasification and PIR).

## d. Use of critical raw materials and recycled materials

If possible, the use of critical raw materials should be minimized for the production of vehicles in order to reduce social and environmental impacts in mining countries. We propose that there may be a maximum amount for specific critical raw materials in vehicles/ vehicle parts (e.g. batteries, catalyzer and permanent magnet motors). This may also contribute to limiting the size of vehicles or batteries in general. To achieve further improvements in this matter, transparency is a crucial building block, making it necessary that all producers reveal used materials for production as well as its origin.

To reduce dependency on virgin critical raw materials, minimum recycled content targets of CRMs in vehicles and components are necessary . Usage of recycled material can considerably contribute to reduce environmental impacts from material sourcing. For vehicles, already secondary materials such as plastic, steel, aluminum, copper, gold, silver and platinum are available on the marked, but its material circulation and wide application must further be promoted in the automotive sector. In addition, also for permanent magnets recycled content targets according to the Critical Raw Materials Act Art. 28, are necessary. Therefore, we assess the currently proposed recycled content target for plastics as not sufficient. It is necessary, to increase the mandatory minimum recycled content targets for plastics and to make plastic type specific provisions. Furthermore, recycled content targets must be expanded to additional material groups such as aluminum/ alloys, magnesium, steel, rare earths and copper. It is also necessary to establish financial incentives in order to promote the use of recyclates in vehicles (e.g. tax adjustments).

Regarding the calculation method for recycled content provisions, only Post consumer recyclates (PCR) should count towards recycled content targets. Including also post- industrial waste may enable easy circumvention of defined provisions. Claiming PCR only facilitates closed loop recycling. Additionally, it avoids recyclates that are available anyway being diverted to meet targets, without actually recycling more. Only an exclusion of PIR in the definition of recycled content will have intended promoting effects on the expansion of the recycling infrastructure. Regarding the definition of recycled content targets for

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<sup>&</sup>lt;sup>1</sup> ECOS, DUH, ZWE (2021): Chemical recycling and recovery, <u>https://zerowasteeurope.eu/library/chemical-recycling-and-recov-ery-recommendation-to-categorise-thermal-decomposition-of-plastic-waste-to-molecular-level-feedstock-as-chemical-recov-ery/</u>

plastics, we like to note that "recyclates" from pyrolysis and gasification should not be counted towards these targets. DUH and several other European NGOs classify these techniques as "chemical recovery" because they only recover the feedstock for plastics production and this cannot be counted as recycled<sup>2</sup>. Additionally, we warn that mass balance with free allocation is allowed to fulfill recycled content targets because this may disadvantage environmental beneficial mechanical recyclers and poses considerable risk for consumer protection<sup>3</sup>. We propose to follow the segregation or batch-level mass balance approach with proportional allocation and oppose a free trading system for recyclates.

#### Criteria for vehicles:

- Demand mandatory recycled content targets for steel, aluminum and CRMs as well as higher and plastic type specific targets for plastics in vehicles and components (obtained from post-consumer waste and without including recyclates from pyrolysis and gasification) and enforce administrative penalties if the targets are not met. Good proposals for recycled content targets can be found in the Impact Assessment under Policy Option (PO2C). PIR should be excluded from the calculation of recycled content targets, or at least the PIR/PCR share should be shown transparently.
- Product advertisement on the Internet should be obliged to list all raw materials used, the recycled content and the countries of origin of the primary raw materials for the vehicle and its components.

#### e. Standardization

A better development of standardized parts and components of vehicles is required to allow a more efficient use of resources. A standardization of wear parts such as tires, brake pads, windshield wipers, light bulbs, batteries or charging connector can facilitate repair and maintenance work and reduce environmental impacts through production and diminish waste. The use of standardized wear/ spare parts in different vehicles also supports the long-term availability of these parts and facilitates the fulfillment of respective availability obligations for producers. In addition, the subsequent upgradeability of vehicles with newly developed wear/ spare parts is supported.

Standardization should be developed as far as possible within manufacturers product lines, but also crossmanufacturers. Manufacturers should be motivated to use standardized parts and to publish technical specifications of vehicles and components to facilitate standardization.

## f. Energy efficiency (for BEVs)

Charging and discharging of an electric vehicle must be as efficient as possible. Energy efficiency should not decrease significantly due to the aging of the vehicle. The charger should have a low energy consumption if the battery is not connected (stand-by). However, the most decisive aspect with respect to energy consumption is probably related to the total energy consumption of a vehicle. Thus, incentives are needed to reduce the size, weight and related energy consumption of vehicles.

#### Criteria devices:

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<sup>&</sup>lt;sup>2</sup> ECOS, DUH, ZWE (2021): Chemical recycling and recovery, <u>https://zerowasteeurope.eu/library/chemical-recycling-and-recov-ery-recommendation-to-categorise-thermal-decomposition-of-plastic-waste-to-molecular-level-feedstock-as-chemical-recov-ery/</u>

<sup>&</sup>lt;sup>3</sup> ECOS, DUH, EEB, DUH and others (2023): Joint statement calling for a transparent and reliable policy framework defining recycled content in plastic, <u>https://zerowasteeurope.eu/wp-content/uploads/2023/07/Joint letter recycled content meth-odology\_SUPD-1.pdf</u>

- Producers should provide information to customers about the environmental benefits of leightweight cars with low total energy consumption. Additionally, consumers must be informed on energy-efficient use of the electric vehicle battery as well as the ecological advantages of using renewable energy.
- The commission should integrate obligatory requirements on energy efficiency for battery electric vehicles. Such requirements may be integrated into regulations CO<sub>2</sub> emission performance standards for cars and vans and should set incentives for a general reduction of energy consumption from BEVs.

## g. Production Process & Carbon Footprint

During production, environmental impacts through energy consumption, raw material extraction, water use, industrial processing and waste generation should be minimized. Producers should demand the use of high environmental standards (e.g. use of renewable energy) also from suppliers and subcontractors. Particularly, transparency for customers about environmental emissions of vehicles should be much more promoted (e.g. through the promotion of reliable labels) to enhance environmental purchasing decisions. DUH criticizes sharply that no obligatory carbon footprint limit is defined or targeted for the production of vehicles and vehicle parts in the current draft.

#### Criteria for vehicles:

- Maximum carbon footprint emission thresholds must be set and require the use of green energy in vehicle production.
- For the production of vehicles, the use of 100 % renewable energy should be the aim. Manufacturers should only be able to claim the use of renewable energy if they can prove this via direct connection to the renewable energy plant or a contract demonstrating a temporal (in real time or at least every hour) and geographical link between energy supply and use.
- For all vehicles and vehicle parts, information on the energy requirement, the share of renewable energies and the carbon footprint of production as well as the calculation method must be publicly available for customers on the Internet and in the product passport.

## 4. Information and labelling requirements (Chapter III)

#### a. Product passport and labelling

We vote for a digital product passport for vehicles allowing quick environment-related information, e.g. via a QR-code. The Circularity Vehicle Passport (CVP) defined in Art. 13 is a pale equivalent of the Batteries Passport and the Digital Product Passport and will only be introduced after 84 months after entry into force. Several relevant provisions are missing, such as the carbon footprint or concrete information for reparability. DUH claims that the CVP should provide information on producer, expected lifetime, repairing/ dismantling instructions, product services, availability of spare parts, environmental-friendly usage/ disposal behavior, fuel/ energy consumption, contained resources and pollutants, recycled content, environmental/ carbon footprint and take-back procedure. Specifically, details about Substances of Concern (SoC) and their locations in vehicles should be included and not within the REACH only, as such substances need to be traceable with regard to high quality recycling. Additionally, the CVP must provide information on defects and repairs that can be updated by workshops and reuse actors and be read by consumers. The vehicle passport must also be linked to the battery passport. Offering of vehicles should only be al-

lowed if this comprehensive environmental information is provided. In addition to the realistic fuel/ energy consumption, the expected lifetime and reparability (repair index) of the vehicle should be displayed clearly visible during offers (in analogy to current energy labels). Thus, consumers are able to better identify less environmentally harmful vehicles through mandatory labelling. Also public procurement should give mandatory preference to the less environmentally harmful vehicle through a database if the purchase of a vehicle cannot be avoided.

## b. Circularity Strategy

While eco-design and circular measures improve the lifetime of resources used, the best environmental protection is to reduce the demand as much as possible. Art. 9 introduces a Circularity Strategy for manufacturers including elements listed in Annex IV such as a non-technical description of the actions planned to ensure that the vehicles belonging to the vehicle type continue to meet the legal requirements referred to in Articles 4 to 7 throughout their production. In addition, manufacturers should include strategies to diminish total environmental footprint of their fleet, particularly through reducing average vehicle size, fuel/ energy demand and increased ecodesign and repair conditions.

## c. Manufacturer-financed information campaigns

In addition to good labelling, information campaigns, e.g. on vehicle size reduction (cf. 1.b.) can contribute to changing consumption patterns, sensitizing consumers sustainably and promoting resource efficiency. Such campaigns need to be adequately funded, financed by manufacturers, as this follows the polluter pays principle. The content creation needs to be done by independent third parties to avoid interest placement of manufacturers.

## 5. Management of end-of-life vehicles (Chapter IV)

## a. Ensure extended producer responsibility

A comprehensive framework of Extended Producer Responsibility (EPR) must be established to minimize environmental impacts from production and treatment of vehicles. The current legislative framework puts an emphasis on obligation and costs related to managing end-of-life vehicles that should be covered by financial contributions of producers. However, to follow a more comprehensive circular approach, they should also strongly enhance collection, repair and reuse of vehicles, parts and components and take responsibility to raise awareness among consumers for environmentally friendly behavior. DUH therefore welcomes the establishment of an EPR system in the draft in Art. 16, but claims for a wider extension of producer obligations.

Apart from the provisions on ensuring collection in accordance with Art. 23 and treatment in accordance with Art. 27, producers should take full responsibility for the entire life cycle of vehicles, from eco-design and repair to collection, reuse and end-of-life.

In addition, an EPR system that promotes eco-design and smaller vehicles is necessary. Such eco-modulation measures in which fees are directly related to the environmental impact of the vehicles (resource and climate aspects) and visible for consumers (visible fees) may have considerable effects to enhance ecodesign and consumer behavior. In contrast to the criteria for ecomodulation proposed in the draft, the fees should not mainly focus on recycling, but should prioritize parameters such as total size, durability, reparability, use of reused parts and recyclates. The possibility of setting effective ecomodulation measures is another argument to obligate producers to fulfill EPR via collective PROs.

Incorporating the upper waste hierarchy into producers' responsibility, they should additionally be obliged to fulfil binding reuse targets and implement mandatory testing for reuse of parts and components prior to shredding. With regard to durability of vehicles and wear/ spare parts, producers must promote repair, not only through repair-friendly design and offering of spare parts, but also by channeling part of the EPR fees into repair promotion. With regard to EPR fees, they should also be used for disposal during export (cf. 1. General requirements point f). Producer responsibility should only end once the vehicle has been verifiably recycled to a high standard. To ensure this high-quality recycling - when reuse is no longer possible - producers responsibility should belinked to the product passport. Concerning Art. 18 on producer responsibility organisations (PROs), it is advisable to consider full product responsibility through obligatory collective schemes, as practices in Germany of individual producer responsibility for electrical appliances, has led to unfavorable results. Lastly, with regard to Art. 17 on the creation of a register to monitor compliance of producers with the requirements set out in chapter IV on management of end-of-life vehicles, it should be envisaged to introduce such a register for compliance with eco-design requirements as well.

#### b. Treatment and Reuse

Art. 34 states that member states shall ensure that waste management operators meet the respective reuse, recovery and recycling targets of 85 %/95 % by average weight per vehicle. However, separate reuse targets are missing with the consequence that mainly recycling will contribute to fulfill the targets in practice. Therefore, we demand to set separate reuse targets. Moreover, the targets should not only be obligatory for member states, but also for producers and PROs separately. This would set necessary incentives to set up respective structures for reuse accordingly. In order to allow reuse, the first removal of parts and components must be in a non-destructive way.

In general, reuse and repair must strongly be favored as preferred strategies before recycling and shredding. The legislative text currently still favors recycling over these strategies with higher priority according to the waste hierarchy. Concerning the requirements set out in Art.31 regarding removed parts and components, an assessment of reusability for components, parts and materials must be mandatory (before removal) without exceptions and effectively controlled by authorities. In addition to the listed parts that should be removable in Part C of Annex VII, all electronic parts without exceptions regarding their size and mono-metal and plastic parts from 1 kg must be removed before shredding. For all of these part a destruction-free removal must be enabled. To enhance reuse, authorised treatment facilities and recycling facilities should cooperate with reuse stakeholders.

## c. Collection and Exports

A proper collection system for End-of-life vehicles is important to ensure reuse or high-quality recycling. Art. 23 of the proposal already states that collection systems cover the territory and ensure adequate availability of authorized treatment facilities. However, this could be more concrete as in defining a specific target for collection systems.

Regarding export and deregistration, Art. 26 lists the obligations of vehicle owners to deliver their vehicles to an authorised treatment facility when it reaches the end-of-life stage. Presenting the subsequent "certificate of destruction" for the vehicle's deregistration must become mandatory. This would set strong incentives for vehicle owners to use official reuse or recycling pathways, because otherwise they would have to continue paying taxes. There should not be exceptions for vehicles of historical interest (old-timers) to avoid loopholes. There may be reduced taxes for such old-timers if they are not used in the roads.

Art. 36 defines that shipment of end-of-life vehicles from the EU to a third country shall only count towards the fulfilment of obligations and targets if the exporter provides documentary evidence demonstrating that the treatment took place in conditions that are "broadly equivalent" to the requirements laid down in this regulation. It is not clear what equivalent conditions is referred to and which specific conditions must be met. Additionally, it seems unclear how equivalent treatment conditions should be controlled outside of Europe.

In addition, to finance treatment in other non-European countries, a fund should be established through EPR-schemes. The fund should receive for each vehicle EPR fees that are equivalent to the average costs of treatment of this vehicle within Europe.



