QUOTATION OF THIS SYNTHESIS


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Regulations

European Regulations


- Promotion of waste prevention policies during the vehicle design and manufacturing phases;
- Implementation of an ELV collection system;
- ELV processing conditions;
- ELV reuse and recovery;
- Communication obligations with various stakeholders.

More specifically, it sets from the 1st January 2015 a target of 85% ELV reuse and recycling and 95% ELV reuse and recovery. If the first goal is quite clearly exceeded, the second has not yet been reached in 2017 but France is nearing this goal thanks to the mobilisation of all actors in the sector.

French Regulations

The current French regulatory framework includes articles R 543-153 to R 543-171 of the Environmental Code as well as orders and decrees that complement these provisions, amongst which:

- Order of 19 January 2005 on the calculation of ELV reuse, recycling and recovery;
- Order of 19 January 2005 regarding annual declarations by vehicle manufacturers and ELV approved shredders and approved dismantlers;
- Order of 27 June 2011 on networks of authorised ELV centres set up by manufacturers or manufacturers’ groups;
- Order of 2 May 2012 relating to authorisations given to ELV centres and ELV shredding facility operators;
- Order of 22 August 2013 on the ELV sector economic balance assessment authority.

Which vehicles are involved?

Passenger cars, commercial vehicles with an authorised loaded weight of less than 3.5 tons and three-wheel motor vehicles mentioned in article R 311-1 of the French highway code are all concerned by the French regulations for the processing of ELVs.

Who is authorised for the processing of ELVs?

Only ELV centres approved by the prefectures are able to process ELVs and deliver destruction certificates to the holders.

What processing methods are permitted?

ELV components and materials should preferably be reused (subject to their traceability) recovered and especially recycled rather than destroyed, whenever this is viable from an ecological point of view.

Who covers the cost of processing an ELV?

ELV accredited centres cannot charge holders for accepting ELVs and deliver destruction certificates to the holders.
**Organisation**

**Who are the actors in the sector and what are their duties?**

![Figure 2: Schematic flow of the ELV sector](image)

**Manufacturers** are defined by Article R543-155 of the Environmental Code as "persons manufacturing vehicles in France and those who hold a contract with a foreign manufacturer, import or introduce new vehicles into France on a professional basis." Hence, most of these are French car manufacturers (Renault and PSA Group) but also importer manufacturers such as Ford, Fiat, Volkswagen, Toyota, BMW, etc. Article R543-156 stipulates that "each manufacturer must implement, either directly or through one or more entities mandated by itself, a network of authorised ELV centres, suitably distributed across the country and required to accept (...) all end-of-life vehicles provided by a holder. Manufacturers can come together to collectively fulfil their obligations". Furthermore, they have obligations in terms of information communication (technical and economic data relating to vehicles placed on the market that must be included in documents aimed at the general public).

The holders are defined by Article R543-155 of the Environmental Code as "vehicle owners, persons acting on behalf of the owners or the authorities owning vehicle pounds, defined in Articles R325-20 and R325-21 of the highway code." Holders are thus primarily:
- Private individuals;
- Garages and car dealerships;
- Insurance companies and mutual insurances;
- Car pounds.

Holders must bring their end-of-life vehicles to authorised ELV Centres only.

**ELV centres** are defined by Article R543-155 of the Environmental Code as "entities involved in the processing, storage, decontamination and dismantling of end-of-life vehicles, known as ELV centres which must be authorised in accordance with the provisions of Article R543-162."

1,706 ELV centres are approved in 2017, a figure slightly higher than in 2016 (1,694). The geographical location of the ELV centres reflects on the size of fleets of vehicles on the road.

![Figure 3: Number of ELV centres by department](image)

Shredders are defined as "entities involved in the processing, storage and shredding of vehicles previously decontaminated and dismantled by an ELV centre." There are 57 approved shredders in 2017.

Moreover, ELVs can only be processed in installations classified for environmental protection. ELV centre and shredder operators must get authorisation from the prefecture. Specifications defining the beneficiary's obligations are given in the appendix to this agreement which includes the requirements for information communication. These specifications are defined by order of 2 May 2012.

Note: The Observatory data for a given year may vary slightly from one summary to another. For example, 2016 data presented in this synthesis was updated. The results presented below therefore take into account the changes in declarations made via the SYDEREP since the drafting of the previous summary.
Market

2,549,402 vehicles (all types) have been put on the market in 2017.

![Figure 4: Evolution of vehicles placed on the market between 2010 and 2017 (FCMC data)]

According to data from the French Car Manufacturers’ Committee (FCMC), there is a slight increase in the number of vehicles coming on the market when compared to 2016 (+ 5.1%) which is on the same scale as 2015/2016. After having been affected by the scrapping incentive schemes for a few years, registrations have been on the rise since 2014.

Manufacturers have implemented actions to promote the processing and recovery of vehicles placed on the market:
- Limiting the use of hazardous substances;
- Integrating recycled or biosourced material;
- Marking certain parts for dismantling; and
- Facilitating the decontamination processes.

Manufacturers have also organised presentations in their ELV centre network to encourage a better performance in that sector (organisation of national and regional meetings, incentive measures, awards, distribution of newsletters, etc.).
Annual summary for the end of life vehicles sector (ELV) - 2017 data

Collection

1,138,742 ELVs were reported accepted into approved ELV centres in 2017, representing 1,232,650 tonnes, i.e. an increase of 9% compared to the number reported in 2016.

The average number of ELVs processed in ELV centres is 669, an increase of 8.3% when compared to 2016.

The average weight of ELVs processed is 1,082.47 kg (+1.6% compared to 2016) for a rectified weight of 1,072.67 kg. 91.8% of ELVs processed are passenger cars. Their average age is 18.5 in 2017 (18.2 in 2016).

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger vehicles (PV)</td>
<td>1,038,273</td>
<td>1,006,372</td>
<td>941,478</td>
<td>989,688</td>
<td>1,045,066</td>
</tr>
<tr>
<td>Commercial vehicles &lt;3.5 t (CV)</td>
<td>76,228</td>
<td>77,744</td>
<td>74,286</td>
<td>86,621</td>
<td>92,868</td>
</tr>
<tr>
<td>3-wheel motor vehicles</td>
<td>779</td>
<td>650</td>
<td>562</td>
<td>561</td>
<td>808</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,115,280</strong></td>
<td><strong>1,084,766</strong></td>
<td><strong>1,016,326</strong></td>
<td><strong>1,076,870</strong></td>
<td><strong>1,138,742</strong></td>
</tr>
</tbody>
</table>

Table 1: Evolution of the number of ELVs processed by vehicle type between 2013 and 2017

ELV processed according to their origin

Almost half of the ELVs processed by approved centres are passenger cars. Other sources of supply are mainly automotive professionals as well as insurance and mutual companies.

Figure 6: Origin of ELVs processed by the ELV centres in 2017

1 The rectified weight is equal to the average weight from which is subtracted the average non-metallic burnt weight (from vehicles set on fire).
## Composition of ELVs received by the ELV centres:

### Table 2: Average composition of an ELV in 2017

<table>
<thead>
<tr>
<th>Material</th>
<th>Proportion of each material in</th>
<th>Weight of each material in kg/ELV</th>
<th>Rectified weight of each material in kg/ELV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrous metals</td>
<td>70.00%</td>
<td>757.73</td>
<td>757.73</td>
</tr>
<tr>
<td>Polypropylene (PP) other parts</td>
<td>4.40%</td>
<td>47.63</td>
<td>45.42</td>
</tr>
<tr>
<td>Non-ferrous metals (excluding wiring harnesses)</td>
<td>4.00%</td>
<td>43.30</td>
<td>43.30</td>
</tr>
<tr>
<td>Tyres</td>
<td>3.40%</td>
<td>36.80</td>
<td>36.80</td>
</tr>
<tr>
<td>Glass</td>
<td>3.00%</td>
<td>32.47</td>
<td>30.97</td>
</tr>
<tr>
<td>ABS, PVC, PC, PMMA, PS, etc.</td>
<td>2.20%</td>
<td>23.81</td>
<td>22.71</td>
</tr>
<tr>
<td>Polyurethane foams</td>
<td>2.00%</td>
<td>21.65</td>
<td>20.65</td>
</tr>
<tr>
<td>Textiles, other</td>
<td>1.65%</td>
<td>17.86</td>
<td>17.03</td>
</tr>
<tr>
<td>Lead-acid starter battery</td>
<td>1.40%</td>
<td>15.15</td>
<td>15.15</td>
</tr>
<tr>
<td>Other rubbers</td>
<td>1.10%</td>
<td>11.91</td>
<td>11.36</td>
</tr>
<tr>
<td>Polypropylene (PP) bumpers</td>
<td>1.10%</td>
<td>11.91</td>
<td>11.36</td>
</tr>
<tr>
<td>Wiring harnesses</td>
<td>1.00%</td>
<td>10.82</td>
<td>10.32</td>
</tr>
<tr>
<td>Polyamide (PA)</td>
<td>1.00%</td>
<td>10.82</td>
<td>10.32</td>
</tr>
<tr>
<td>Paint</td>
<td>0.80%</td>
<td>8.66</td>
<td>8.26</td>
</tr>
<tr>
<td>Polyethylene (PE), fuel tanks</td>
<td>0.80%</td>
<td>8.66</td>
<td>8.26</td>
</tr>
<tr>
<td>Used oils and filters</td>
<td>0.66%</td>
<td>7.14</td>
<td>7.14</td>
</tr>
<tr>
<td>Catalytic converters</td>
<td>0.50%</td>
<td>5.41</td>
<td>5.41</td>
</tr>
<tr>
<td>Polyethylene (PE), other parts</td>
<td>0.50%</td>
<td>5.41</td>
<td>5.16</td>
</tr>
<tr>
<td>Coolant or brake fluid</td>
<td>0.44%</td>
<td>4.76</td>
<td>4.76</td>
</tr>
<tr>
<td>Cooling fluid</td>
<td>0.05%</td>
<td>0.54</td>
<td>0.54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>1,082.47</strong></td>
<td><strong>1,072.67</strong></td>
</tr>
</tbody>
</table>
Processing

ELV processing is initiated by the ELV centres then finished by shredders and post-shredding separation centres.

![Simplified diagram of the processing of an ELV](image)

**Depollution of ELVs and removal of used tyres**

ELV centres carry out depollution activities on ELVs received, with the requirement to remove batteries, used oil and filters, coolants or brake fluids as well as air conditioning fluids.

31,433 tonnes of waste from depollution were removed in 2017 from ELVs, i.e. 27.6 kg per ELV. 75% of this waste was recycled (in weight), 11% recycled (batteries only) and 14% used to produce energy.

ELV centres are also required to remove used tyres: 41,910 tonnes of tyres were removed in 2017 from ELV. 39% of these tyres were reused, 32% recycled or 28% (by weight) used to produce energy.

**Dismantling parts for reuse**

81,494 tonnes of spare parts were removed from ELV in 2017 for reuse, i.e. 71.6 kg per ELV. This tonnage represents approximately 7.3 million parts. 30% of ELV centres did not remove reusable parts in 2017. In 2016, 29% were in this case. The largest part dismantlers are often companies specialising in light commercial vehicles and 4x4s. The market for reusable parts is substantial for very recent vehicles (less than 5 years old) even though the vehicles in circulation are still under warranty or their value is still significantly high enough for the repair to be done with new parts. It is also significant for vehicles between 5 and 12 years old. This is the bracket within which is the average age of vehicles in circulation (approximately 9 years old).

**Remove material for recycling and recovery**

Excluding depollution and tyres, 94,943 tonnes were removed in 2017 from ELVs for recycling or recovery, i.e. 82.98 kg per ELV (+7.9% when compared with 2016).

The ELV centres are able to remove substances from ELVs to send these to recycling or recovery businesses, more specifically to comply with their non-metallic material recovery requirements. Most material sent for recovery in 2017 by ELV centres are ferrous metals (73% of removed substances for future recovery). 26.8% of ELV centres did not removed any non-metallic material for recycling in 2017, against 25.5% in 2016. Almost 100% of material removed for recovery was sent for recycling.
Destination of ELV hulks

1,165,873 hulks have been declared sent to shredders in 2017, with a tonnage of 995,330 tonnes and an average weight of 853.7 kg.

In 2017, ELV centres have sent slightly more hulks to shredders than they received (4.3% difference). There was therefore a slight reduction in ELVs at ELV centres.

12.9% of hulks, just under 156,404 units, were transferred to foreign shredders. This number is slightly higher than in the previous three years.

Among countries receiving ELVs, Spain and Belgium are the preferred destinations as previously with respectively 74.4% and 23.2% (i.e. 96%) of the total volumes sent abroad.

Shredding

All non-metallic materials from ELV hulks are recovered on average at a rate of 71.5% by shredders in 2017 compared to 72.0% in 2016.

Shredding All non-metallic materials from ELV hulks are recovered on average at a rate of 71.5% by shredders in 2017 compared to 72.0% in 2016.

The average performance of shredders for each material provides a picture of the recycling and recovery rates for an average hulk. It encourages a discussion on available possibilities to further recover materials found in ELVs.

Overall recovery

The graph below summarises the ELV recovery type and level, for France and for each material found in an ELV (ELV centre vs. shredder). PE (polyethylene) tanks and PP (polypropylene) bumpers are the non-metallic materials best recovered by ELV centres. Very little of certain material such as glass, foams, textiles and some plastics (plastics other than polyolefins), is removed in ELV centres and remains on the hulks sent to shredders without the latter being generally able to recover all of these materials.
### Performance of stakeholders

Order of 2 May 2012 sets minimum recovery rates for material issued from ELVs, excluding metals, batteries and fluids from decontamination operations:

- For these materials, ELV centres should meet a reuse and recycling rate of 3.5% of the average weight of the vehicle and a reuse and recovery rate of 5%.
- For these materials, shredders should meet a reuse and recycling rate of 3.5% of the average weight of the vehicle and a reuse and recovery rate of 6%.

In 2017:
- 80.3% of ELV centres meet the reuse and recycling target for non-metallic materials. In 2016, 73.9% were in this case.
- 71.6% meet the reuse and recovery target, against 72.6% in 2016.
- 67.9% of shredders meet the reuse and recycling target for non-metallic materials against 67.4% in 2016.

- 73.6% meet the reuse and recovery target, against 80.4% in 2016.

Directive 2000/53/EC also sets recycling targets at EU level. In 2017, ELV centres and shredders must achieve, together:

- A minimum reuse and recycling rate of 85% of the average vehicle weight.
- A minimum reuse and recovery rate of 95% of the average vehicle weight.

In 2017, for ELV centres and shredders for which their declarations have been verified and their performance cumulated:

- 78.4% of ELV centre/shredder pairs meet the reuse and recycling target. In 2016, 70.5% were in this case.
- 61.7% of ELV centre/shredder pairs meet the reuse and recovery target against 67.6% in 2016.

France reached the following targets in 2017:

- 87.4% reuse and recycling rate (86.9% in 2016) which **exceeds** again the target set by the ELV Directive.
- 94.6% reuse and recovery (against 94.8% in 2016) is slightly **down compared to last year**.

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2 The depollution operations (battery, coolant, used oils, etc.) are fully carried out in ELV centres to meet their regulatory requirements: this explains the 100% recovery rate for these materials.
**Perspective**

*Extending the sector to two-wheeled vehicles, quadricycles and quad bikes.*

As indicated in Measure 29 of the Circular Economy Roadmap, the aim is to extend, by consultation with the stakeholders concerned, the perimeter of the ELV sector to quadricycles, motorcycles... to remove all edge effects that are currently penalising its economic efficiency. The tonnage for these types of vehicles remains small when compared to the rest of the ELV sector.

Implementing an extension to the ELV sector also requires work to assess the actual waste involved and marketing of these vehicles. Quadricycles, quad bikes and two-wheeled vehicles must be characterised to better define the contours (regulatory targets with regards to the ELV sector).

*The Circular Economy Roadmap (CER)*

In parallel, public authorities are working on the implementation of measures from the Circular Economy Roadmap (CER) presented on 23rd April 2018 by Edouard PHILIPPE and Brune POIRSON.

The priority for measures from the CER is to fight against illegal trafficking in ELVs: the aim is for all ELVs to be processed in a legal sector in compliance with the ELV Directive. As such, several measures have been included into the CER (see measure No. 40 in the CER):

- To fight against illegal ELV processing sites, environmental inspectors must be given the option of issuing violation notices and applying set fines as soon as illegal actions are observed. They must also be given the authorisation to immediately seize ELVs on illegal sites to return these ELVs into the legal system;
- When declaring the termination of insurance for an ELV, a certificate of destruction of the vehicle by an approved centre must be provided;
- By 2022, chasing up users whose vehicle safety inspection has expired to check that the vehicle has either been sold or disposed of in an authorised ELV centre.

Therefore, the priority today is to fight against the illegal sector, by better involving all stakeholders (manufacturers, insurance companies...).

*Other major issues in the sector* Public authorities have also identified a set of major challenges for the sector with a view to improving overall practices:

- Deployment of an action plan in all overseas communities by car manufacturers in order to reduce abandoned ELVs;
- Management of flame retardants, containing persistent organic pollutants, to be included in the next revision of the ELV Directive among other topics (illegal sector, electric vehicles...);
- Continued improvement of the recovery within the ELV sector, in the context of meeting the European targets for reuse and recovery;
- Development of a market for spare parts from the circular economy (reusable parts) to be resumed by the publication of consumer information modalities in Order of 8 October 2018 (the provisions of which will come into force on 1 April 2019). The DGPR has worked to ensure that the Order by the Ministry of the Economy is made because it is essential to complete the regulatory framework put in place when applying the energy transition law for green growth dated 17 August 2015 (see Article 224-67 of the Consumer Code). Implementing this measure is part of the transition to a circular economy, which aims at promoting the reuse of goods. This is an alternative to purchasing new parts.
ABOUT ADEME

ADEME, the French Agency for the Environment and Energy Management, is active in the implementation of public policies in the areas of the environment, energy and sustainable development. ADEME provides expertise and advisory services to businesses, local authorities and communities, government bodies and the public at large, to enable them to establish and consolidate their environmental action. The Agency helps finance projects, from research to implementation in the following areas: waste management, soil preservation, energy efficiency, and renewable energies, air quality, noise control, transition to a circular economy and fight against food waste.

ADEME is a public organisation under the joint supervision of the Ministry of Ecology and Solidarity Transition and the Ministry of Higher Education, Research and Innovation.
SYNTHESIS
OF THE END-OF-LIFE VEHICLES SECTOR ANNUAL REPORT
2017 DATA

The report summarized in this synthesis draws up an inventory of the end-of-life vehicles (ELV) sector in France in 2017, based on information collected through the Observatory of End-of-life vehicles and completed by qualitative analysis provided by players of the sector.

The website SYDEREP (SYstème DEclaratif des filières REP) gathers all Registers and Observatories for the streams Electric and electronic waste, Batteries and Accumulators, Fluorine Gas, Used Tyres, Packaging, Paper, End-of-life vehicles & Equipment and Furnishing waste.

In 2017, 2,549,402 vehicles (all types) were put on the market.
1,138,742 ELVs were declared collected by authorised treatments facilities, which represents 1,232,650 tons.

France reaches 87.3% of reuse and recycling rate of the weight of collected ELVs and 94.5% of reuse and recovery rate.