



An EU funded project

# Specific waste stream plan on end of life vehicles management

**30<sup>th</sup> of May 2017**

# Chapters and Issues of the Plan

- ❑ Legal framework for the management of ELV;
- ❑ Institutional set-up;
- ❑ Current status of the management of ELV;
- ❑ Collection system and treatment facilities;
- ❑ Forecast on waste quantities;
- ❑ Assessment of needs;
- ❑ Sources and levels of funding;
- ❑ Setting of objectives;
- ❑ Action plan for achieving the objectives.

# Legal framework for the management of ELV

- ❑ Law on Waste Management

Article 55: Specific regulations on end-of-life vehicles

- ❑ Rulebook on end-of-life vehicles (98/2010)

Further specific regulations on end-of-life vehicles

- ❑ Decree on products which become special waste streams upon their use (3/2014)

Environmental tax for vehicles placed on the market

## Current status of the management of ELV

- ❑ Total number of registered passenger cars:  
**1,797,252**
- ❑ Number of first-time registered passenger cars:  
**105,393**
- ❑ Number of imported vehicles:
  - ❑ M1: 84,300
  - ❑ N1: 7,300
- ❑ Weight of exported vehicles:
  - ❑ M1: 144,500 t
  - ❑ N1: 4,500 t

# Current status of the management of ELV

Code	Waste	Quantity (t)
16 01 04*	end-of-life vehicles	1,196
16 01 06	end-of-life vehicles, containing neither liquids nor other hazardous components	1,830

- ❑ 29,590 t of waste generated under the waste codes for wastes from dismantling of ELV and vehicle maintenance

The reported ELV quantities are **too low!**

## Current status of the management of ELV

The ELV reported to SEPA seem to be too low. One possible reason for the low figures is that some operators might not yet properly fulfill their reporting obligations.

Moreover, it can be assumed, that ELV are often collected by informal collection activities, with the aim to sell spare parts and scrap metal for recycling. End-of-life vehicles might also be shipped abroad informally, or by private persons.

# Current status of the management of ELV

Quantity of treated ELV:

- ❑ 16 01 04\* end-of-life vehicles: 718 t
- ❑ 16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components: 1,168 t
- ❑ This means most probably:
  - part of ELV are not treated in authorized facilities
  - and/or
  - part of ELV are not reported officially
  - and/or
  - part of ELV are temporary storage

# Collection system and treatment facilities

The different facilities necessary for ELV management

- Collection point:
  - Receives ELV as hazardous waste from last owner
  - Sends ELV as hazardous waste to dismantling facility
- Dismantling facility:
  - Depollution → hazardous waste
  - Dismantling → non-hazardous waste, spare parts for reuse
  - Sends depolluted and dismantled ELV as non-hazardous waste to shredder
- Shredder:
  - Shredding of ELV together with other metal waste (e.g. WEEE)
  - Metals will be recycled
  - Fluff-light fraction (or automotive shredder residue) goes to landfill (banned in some countries) or will be treated (Post Shredder Technology)



# Forecast on waste quantities

Estimation method 1:

- ❑ Based on the number of newly registered passenger vehicles about 80,000 t should fall out of the car fleet.
- ❑ 50% = ELV and 50% = exported vehicles
  - Approx. 40,000 t ELV/a

# Forecast on waste quantities

Estimation method 2:

Based on information for the European Member States Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, Slovenia, Slovakia and Hungary

- ❑ 7.0 kg ELV/capita

= for Serbia: 50,000 t

- ❑ 19 kg ELV per registered passenger cars

= for Serbia: 34,100 t

➤ Mean value = 42,000 t

- ❑ Estimation method 1 and 2: 40,000 – 42,000 t ELV/a

## Assessment of needs

- ❑ The situation of the management of ELV is analyzed In the National Waste Management Strategy from 2010. For the year 2019 a quantity of 124,000 t ELV is expected per year and for the period 2010 – 2019 an amount of 30 Mio € is estimated to be necessary for the management of ELV.
- ❑ From the estimations in the SWMP for ELV, it can be concluded that the annually generated quantity of ELV in Serbia is between 40,000 and 42,000 tons only.

## Assessment of needs

- ❑ This implies investment costs of one third of the above mentioned costs which is 10 Mio €. Dismantling and shredding infrastructure for ELV should develop progressively with increasing demand.
- ❑ It is expected that systems and facilities for the management of ELV, being under the responsibility of private sector, will almost completely be funded by private sector from its own capital and/or long term commercial loans.

## Sources and levels of funding

- ❑ Operation of ELV management systems are mainly self-financed because of revenues from sale of recycled material and of spare parts.
- ❑ Producers' fees (if any) are mainly used to fund data management, auditing activities, communication efforts and administrative costs.
- ❑ In the majority of EU Member States for ELV management exist EPR schemes either with individual or with collective responsibility

# Sources and levels of funding

- ❑ In general funding the management system of ELVs by Gov. is not necessary
- ❑ It would be useful to establish financial incentives to direct the ELVs to the legally acting collection and dismantling facilities
- ❑ Financial instruments proposed :
  - In case the ELV is submitted to an authorized collection or dismantling facility the last owner receives a significant amount of money (e.g. 100€/ 12,000 RSD) or a discount provided for buying a new car;
  - Introducing a landfill tax for shredder residues.

# Evaluation of the usefulness and suitability of the use of economic instruments

Establishing a Landfill tax for disposal of shredder residues:

In Serbia, the cost for waste to be landfilled is still low compared to other European Countries. The landfilling of shredder residues is commonly used in many cases. Meaning that about 25% by the weight of an ELV ends which representing shredding residues is landfilled. In order to achieve the targets laid down in the ELV-Directive it is necessary to recycle at least some part of the shredding residue. This can be done by so called Post Shredder Technologies (PST). The costs for these technologies are considerable higher than landfilling.

Thus, PST to be economically feasible, implementation of a Landfill tax for disposal of shredder residues shall be taken into consideration.

## Introduction of other financial incentives:

In order to increase the ELVs collection among the country, introduction of financial incentives to surrender ELVs only to authorized collection or dismantling facilities shall be considered, such as a fix amount of money paid to the final owner or a discount provided by the automotive sellers/producers to surrender ELV only to authorized collection or dismantling facilities.



## Introducing of EPR schemes for ELV:

According to the report of the project “Development of Guidance on Extended Producer Responsibility (EPR)” commissioned by the EC, a better performance in ELVs management can be observed in those countries where the EPR schemes are introduced.

In Europe there are different EPR schemes for implementing the ELV-Directive, depending on the individual situation in the Member States. There are EPR schemes with significant fees paid by the producers (The Netherlands) and others with no or very little fees (Germany) and costs are likely to be covered by the revenues from sale of parts and the value of recycled materials.

# Thank you!



Ion Nae Musetoiu

MS Expert, Romania