

**A National Approach to the Environmental Management of End-of-life  
Vehicles in Canada:**

**Submission to the Canadian Council of Ministers of the Environment**

**by the**

**Automotive Recyclers of Canada**

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## **Introduction:**

The Automotive Recyclers of Canada is the national voice of the vehicle recycling industry representing, through its provincial affiliates, approximately 400 end-of-life vehicle (ELV) recyclers and dismantlers throughout Canada.

ELV processing represents one of the largest recycling sectors in Canada with about 1.2 million retired recycled each year. With a 94% ELV recovery and return rate, ELV waste diversion rates are higher than those for most provincial waste diversion programs.

While ELV processors are subject to a number of provincial and federal requirements, ELV management practices are highly variable. The practice of processing ELVs throughout the country is not subject to consistent or comprehensive regulated standards.

The lack of common processing standards for ELVs is significant. While used parts and scrap metal values are driving high recycling rates, ELVs also include a number of substances of concerns that incur costs when properly removed. It is common for many ELVs processors to reduce costs by ignoring environmental standards with respect to these materials.

This creates an uneven playing field in the sector. While a number of vehicle recyclers operate to high environmental standards, with attendant high rates of reuse, recycling and minimal environmental discharges, the majority operate to no standard at all.

Increasingly this sector is becoming subject to a number of government waste management requirements. Different provincial and federal waste management initiatives create obligations with respect to how vehicles and vehicle components are managed. British Columbia has a requirement for ELV processors to establish waste management plans. Ontario has discussed designating ELVs for waste diversion in its mid-term plans.<sup>1</sup> Quebec is expanding its extended producer responsibility (EPR) programs and will likely consider adding ELVs. The federal government has proposed implementing EPR rules related to the management of ozone depleting substances (ODS) including how those substances in vehicles are managed.

To date government initiatives to address vehicle components through waste diversion programs have not effectively addressed the serious environmental problems associated with ELV processing. The creation of EPR type waste management obligations with respect to ELVs, in the absence of a common and enforceable environmental standard for ELV processing, is likely to be counterproductive.

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<sup>1</sup> *From Waste to Worth: The Role of Waste Diversion in the Green Economy*. Minister's Report on the Waste Diversion Act 2002 Review October 2009 Ontario Ministry of the Environment

With respect to vehicle manufacturers, a national sector is threatened with a patchwork of various waste management requirements and obligations that are unlikely to generate actual improvements in ELV recycling. With respect to automotive recyclers, responsible businesses may be burdened with additional obligations, while their competitors continue to operate outside of provincial and federal waste management programs.

For the above reasons, the Automotive Recyclers of Canada (ARC) believes that it is timely to consider a national standard with respect to ELV processing.

One of the core objectives of such an approach is to implement and enforce a common environmental processing standard for ELVs. This would address the single most significant problem associated with ELV recycling in Canada today.

In Ontario, the Ontario Automotive Recyclers Association (OARA), an ARC affiliate has been working in collaboration with the Canadian Vehicle Manufacturer's Association (CVMA) to create a licensing regime for vehicle recyclers in Ontario. The CVMA and ARC believe that the core elements of that proposal represent objectives that are readily achievable throughout Canada.

These include:

- 1.) Codifying the National Code of Practice for Automotive Recyclers developed under the National Vehicle Scrappage Program ("Retire your Ride") in provincially set regulation;
- 2.) Licensing or registering businesses engaged in ELV processing to ensure sector-wide compliance with that common environmental processing standard; and
- 3.) Auditing and monitoring processors and reporting annually on ELV recycling activity;

While the cross jurisdictional nature of environmental policy raises issues related to a national conception of ELV processing, both the ARC and CVMA believe that coordinating government policy in this area is an essential component to enhancing vehicle manufacturing competitiveness and generating positive environmental outcomes with respect to ELV waste management.

The following discussion provides an overview of vehicle recycling in Canada, the impact of voluntary industry initiatives to improve standards, existing government requirements and initiatives and proposes a common approach to addressing ELV recycling problems throughout the country. While jurisdictions may chose to implement various requirements differently, the ARC has

attempted to identify the core elements of a national approach that could be adopted and endorsed by the Canadian Council of Ministers of the Environment.

## **Vehicle Recycling in Canada Today**

### *End-of-Life Vehicles as a Recyclable Commodity*

End-of-life vehicles (ELVs) contain a number of components that can be reused and recycled. The value of reusable and recyclable parts and the scrap metal value of ELVs generates revenues for recyclers. Other vehicle components such as fuels, oils, windshield wiper fluids, antifreeze and refrigerants can be reused or recycled but generally incur costs over and above the revenues that those materials generate for recyclers.

A typical ELV therefore represents a positive-value recyclable commodity, but a commodity which includes a number of negative-value recyclable components. Many of these negative-value ELV components are also substances of concern if released into the environment.

ELVs can also be divided into two general groups. Newer ELVs tend to have higher-value parts and are worth more to recyclers. Older ELVs tend to have lower-value parts. Their recyclable value is derived primarily from the scrap metal contained in the vehicle hulk and parts.

In Canada AR estimates that approximately 1.2 million vehicles are recycled each year. Recycling rates for ELVs are estimated to be around 94%.<sup>2</sup> While the overall recycling rate for ELVs is high, the percentage of each ELV which is recycled will vary dependent upon how that ELV is processed.

The majority of a vehicle by weight is metal (74% to 77%) (88-91% ferrous, 9-12% non-ferrous)<sup>3</sup> and these metals are recycled at extremely high rates. Reusable parts can represent as much as 37% of the vehicle weight for higher value ELVs, but will generally represent less than 1% of the weight of lower value ELVs. Recyclable parts such as tires, batteries and catalytic converters will represent approximately 4% of a typical ELV. Fluids, such as fuels, oils and antifreeze, represent about 1.9% of an ELV by weight or on average about 13 litres per vehicle. Industry recovery rates for ELV fluids are much lower than those for ELV metals.<sup>4</sup>

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<sup>2</sup> A number of studies on vehicle recycling in North America estimate the current recycling rate to be around 94 % see "Gate-to-Gate Life Cycle Inventory Assessment of North American End-of-Life Vehicle Management Processes", a Dissertation by Susan S. Sawyer Beaulieu, University of Windsor, 2009, page 7. The scrap metal value of a typical ELV ranges between \$250 and \$300.

<sup>3</sup> Ibid, page 6.

<sup>4</sup> "Gate-to-Gate Life Cycle Inventory Assessment of North American End-of-Life Vehicle Management Processes", a Dissertation by Susan S. Sawyer Beaulieu, University of Windsor, 2009, page 7.

It is estimated that approximately 83% of a typical ELV by weight will be reused or recycled when it is properly dismantled. The remaining 17% of the vehicle is comprised of automotive shredder residue (ASR). ASR is composed of the remaining co-mingled components of an ELV and is typically a combination of shredded glass, foam and various plastics.

### *Sector Participants*

A number of different types of businesses are engaged in the process of ELV recycling. These include vehicle processors and dismantlers, crushers, shredders and metal manufacturers. The way in which vehicles are recycled varies significantly from vehicle to vehicle but the general pattern of business activity and practices are the similar throughout the country.

ELV processors and dismantlers purchase vehicles from a number of sources including insurance companies, auctions, dealers and the public. Most ELVs go through some form of initial processing which involves the removal of some components and materials prior to further processing.

Following initial processing or dismantling, the hulks of ELVs are forwarded to a metal crusher or shredder. Many, but not all, vehicles hulks are crushed prior to shredding. The vast majority of vehicle hulks are shredded prior to the metal component being utilized in remanufacturing steel or other metals. At the shredding and crushing stage, ELVs may be co-mingled with other scrap metal sources such as appliances.

There are hundreds of businesses involved in the initial processing of ELVs, fewer crushing operations and even fewer shredding operations. In Canada there estimated to be over 1,800 ELV processors but only between 15 and 20 shredding facilities.

### *Dismantling and De-commissioning*

Vehicle dismantlers represent one form of processing. These operations generally rely on the sale of used vehicle parts to finance their business model. Dismantlers remove ELV parts for resale or remanufacturing. Most dismantlers utilize computer inventory systems for tracking their parts inventories and sales which link to other dismantling operations throughout North America.

As part of the dismantling process, these types of business remove substances of concern and ensure that hazardous materials are properly processed. This includes removal of oils and other fluids, mercury switches, lead and lead batteries and ozone depleting substances. In this business model, the incremental costs of addressing ELV substances of concern are offset by the revenues associated with part sales and the scrap metal value of the ELV. In fact, many dismantlers are members of associations that require proper

treatment of ELV components as condition of membership (see Voluntary Industry Initiatives below).

### *Profiting from Pollution: Other ELV Processors*

The percentage of an ELV that is recycled is lower for other processors. Many ELV processors rely primarily on the scrap metal value of the ELV to generate their revenues. These processors generally remove catalytic converters, which have significant value, but the degree to which other vehicle components are treated or processed varies significantly. Some may remove batteries and tires as some shredders insist upon their removal, but treatment of waste oils, removal of mercury switches and ozone depleting substances may be non-existent.

ELV processors in this business model generate less revenue from parts sale and rely more exclusively on the metal value of ELV hulks to drive revenues. Many operators in this type of business model choose to save costs by cutting corners with respect to environmental standards. The time it takes to remove mercury switches, properly remove ozone depleting substances with trained technicians, and remove and treat other substances of concern, adds costs and requires more significant infrastructure investments. These types of businesses are effectively maximizing profits by cutting environmental corners.

In fact the majority of ELVs in Canada are processed for scrap metal value with no evidence or information that substances of concern (such as fuels, lead, mercury, oils, ozone depleting substances and other fluids) are recovered and managed. The fate of these substances is not known but it is likely that many are released into the environment negatively affecting operating sites and landfill materials. Lack of decommissioning also increases airborne pollution as ozone depleting substances are released into the atmosphere, emissions from scrapyard fires are more toxic and contaminants associated with vehicle hulk metal processing are increased.

The release of hundreds of thousands of liters of used motor oil in a single incident would likely generate headlines throughout Canada. However, small, daily releases of substances of concern are happening across the country daily and this can be just as damaging to the environment.

When vehicles are not properly de-commissioned the incidence of scrap yard fires, like the May 2010 fire in Ottawa<sup>5</sup>, are more likely as scrap metal is contaminated with flammable materials. Moreover, the pollution associated with

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<sup>5</sup> "Fire Raises Toxic Concerns: Province asked to look into scrap yard rules", Ottawa Sun, May 3, 2010. Article regarding reaction to a scrap yard fire at Bakermet in Ottawa. Local Councillor, Diane Deans wrote to the then Minister of the Environment, the Honourable John Gerretsen, requesting a meeting to discuss provincial regulations governing scrap metal yards and recycling facilities. According to the press the Bakermet fire was the fourth fire at a scrap metal facility in Ottawa in the last 2 years.

such fires is far more harmful because the materials that are burning may contain substances of concern such as lead, mercury, glycols and oil byproducts.

Without proper ELV de-commissioning, both scrap metal and shredder residue can also have higher levels of contaminants. Fluids and other substances can be absorbed into automotive shredder residue (ASR). The contaminated ASR which ends up in landfill poses a greater risk to ground water contamination than ASR generated from vehicles that have been properly de-commissioned. Metals forwarded from shredders, a source for metal production, can be contaminated with substances of concern so the subsequent emissions from metal manufacturing have higher levels of these materials.<sup>6</sup>

If ozone depleting substances and other refrigerants which also have a high global warming potential, are not properly removed and captured prior to vehicle crushing or shredding, they may simply be released into the atmosphere with associated adverse environmental impacts.

Sites where vehicles are crushed and shredded without proper de-commissioning may become contaminated over time and the likelihood of off-site environmental impacts will increase as the crushing and shredding operations continue to cause materials to leak into the soil.

Operations that are properly removing substances of concern find it harder to compete for ELVs with businesses that undertake little or no processing. Metal recyclers and steel manufacturers may prefer to receive vehicles that have been properly de-commissioned, but the economics of the industry make it difficult for those businesses to refuse shipments from sources that may not be operating to high environmental standards.

Given that vehicle recyclers and metal recyclers are not regulated and that there is also no formalized process for terminating vehicle identification numbers (VINs) throughout Canada, there are no reliable statistics regarding the number of vehicles that are recycled in Canada each year.

The ARC estimates that approximately two thirds of the end-of-life vehicles may be processed without proper removal of fluids or other substances of concern such as lead, mercury and ozone depleting substances.

In conclusion the principal problem associated with ELV recycling in Canada today is not that vehicles are not being recycled, but rather that there are negative environmental impacts associated with the way many, if not most, ELVs are recycled. This is a fundamentally different problem than that faced by most provincial waste diversion initiatives.

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<sup>6</sup> For example, the Canadian Steel Producers Association has adopted a “Zero Mercury” Scrap Purchasing Policy in an effort to improve environmental performance related to mercury emissions and steel production. See CSPA 2010 Environmental Performance Report, page 11.

## **Voluntary Initiatives: Improving Industry Standards**

The ARC and its provincial affiliates have been at the forefront of improving operating standards in the sector. The national association, formed in 1997, is comprised of seven provincial automotive recycler associations. These associations were formed at different times and have slightly different histories and membership levels, but all have been involved with development and implementation of voluntary codes of practice for the sector. They include:

- Automotive Recyclers Association of Atlantic Canada (ARAAC)
- L'Association des Recycleurs de Pièces d'Autos et de Camions (ARPAC)
- Ontario Automotive Recyclers Association (OARA)
- Automotive Recyclers of Manitoba (ARM)
- SGI Salvage - Saskatchewan
- Alberta Automotive Recyclers & Dismantlers Association (AARDA)
- British Columbia Automotive Recyclers (B-CAR)

ARC affiliates represent around 410 of the approximately 1,800 businesses nationally that are involved in processing ELVs.

A number of voluntary environmental programs related to ELVs have been introduced over the last decade. Organized automotive recyclers have partnered with manufacturers, non-government organizations and various levels of government in an effort to improve environmental performance.

### *Car Heaven*

Car Heaven is a program administered by Summerhill Impact which was launched in Ontario in 2000. It is designed to accelerate the retirement of older polluting vehicles, targeting 1995 vehicles or older, by offering consumers a charitable tax donation to the charity of their choice for donated vehicles. The program received financial assistance from the Ontario Ministry of Environment and OARA members dismantled vehicles to ensure that donated ELVs under the national program were processed to acceptable environmental standards. To date over 90,000 vehicles have gone through the program.

### *Switch Out*

OARA members in Ontario were the first to participate in the mercury Switch Out program funded by the Canadian Vehicle Manufacturers Association (CVMA) and the Canadian Steel Producers Association (CSPA). This program began in Ontario in 2001 and was rolled to other provinces in 2008. Switch Out has been a successful voluntary initiative collecting over 400,000 mercury switches.

### *Retire Your Ride*

Administered by Summerhill Impact, Retire Your Ride was a national vehicle retirement incentive program which ran from January 2009 to March 2011. Like Car Heaven, the program targeted vehicles purchased in 1995 or earlier. Consumers received cash incentives of up to \$300 per vehicle along with other provincial benefits dependent upon their location. The federal government provided \$92 million in program funding and approximately 120,000 vehicles were retired under the program nationally.

In order to ensure donated vehicles were treated properly all dismantlers that participated in the program had to process vehicles in accordance with a National Scrapage Code developed by ARC for Environment Canada.

### *The National Scrapage Code*

The National Code of Practice for Automotive Recyclers Participating in the National Vehicle Scrapage Program was created for Environment Canada by the ARC in anticipation of the Retire Your Program.

The Code completed in November 2008 requires hazardous materials to be removed and properly stored and treated prior to vehicle hulks being crushed or shredded. Hazardous materials were defined under the Code to include refrigerants, used oils, transmission and brake fluids, antifreeze and windshield wiper fluids, lead acid batteries, lead weights and lead battery cables, tires and mercury switches. The Code also established a number of site operating requirements and procedures related to spills and treatment of various substances. Vehicle recyclers participating in the Retire Your Ride program were subject to independent third party audits to confirm compliance with the Code.

Although, the Retire Your Ride program has ended the Code remains relevant and in January 2011 was adopted by the Ontario Automotive Recyclers Association as mandatory for its members. As in the case of Retire Your Ride, OARA members are subject to independent audits to ensure compliance with the Code.

Prior to adoption of the National Scrapage Code, OARA, like other ARC affiliates required certain operating standards as a condition of membership. Its O-Car standard which predated the National Code contained similar requirements. Between 2009 and 2011 all OARA operations were reviewed by independent auditors for compliance with the Code and the O-Car standard, compliance issues were identified and addressed. On-going audits will be utilized to ensure compliance with the Code.

Other ARC affiliates have requirements similar to the Ontario O-Car standard and are in the process of adopting the National Code as a mandatory

requirement of membership. For example ARPAC members in Quebec are audited annually to ensure compliance with a decommissioning standard that is very similar to the National Scrappage Code requirements.

### *Conclusion: Voluntary Initiatives*

While there is no question that voluntary initiatives have had a significant impact in improving industry operating standards with respect to ELV recycling, the impact of these programs also speaks to the limitations of voluntary incentives in a sector where profit maximization often comes at the expense of pollution.

Switch Out, for example, has greatly improved the recovery of mercury switches with respect to vehicle recycling, but its impact has been limited primarily to vehicle dismantlers most of whom are members of organized vehicle recycling associations. The total recovery rate of automotive mercury switches is low relative to the number of vehicles that seek end-of-life management and which likely contain mercury switches. For high volume ELV processors that are cutting corners with respect to environmental standards, the limited benefits of participating in such programs as Switch Out or Retire Your Ride, are not sufficient enough for them to change their practices or make the necessary investments to properly treat ELVs and remove substances of concern.

Without participation and commitment by all ELV processors, a long-term voluntary approach to processing standards is not sustainable from either an environmental or human health perspective. It is also inconsistent with the concept of growing a “green economy”: the idea that reasoned environmental standards for the management of end-of-life materials induce efficiency and encourage innovation and investment in the processing sectors that manage those materials.

### **Current Government Regulatory Requirements and Initiatives Related to ELVs**

ELV processors are technically are required to adhere to a number of federal and provincial requirements. Some substances found in ELVs are subject to both federal and provincial requirements. It is not the purpose of this summary to provide an exhaustive list of all federal and provincial laws that ELV processors should adhere to, but rather to identify some of the primary requirements in place and initiatives that are underway specifically related to ELV processing.<sup>7</sup>

All provinces and the federal government have environmental protection legislation that is utilized to manage hazardous substances. These Acts generally create a number of obligations that apply to ELV dismantlers and recyclers, including the following:

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<sup>7</sup> For a more comprehensive summary of federal and provincial statutory requirements that apply to ELV processors, see The National Scrappage Code, pages 13 to 17.

- Hazardous materials, such as used oils, need to be stored and processed in accordance with specified requirements (i.e in a way that minimizes environmental risks);
- Refrigerants to be removed by trained technicians and properly processed;
- Spills of hazardous substances over a certain size need to be reported and addressed;
- Measures are required to prevent runoff to groundwater or contamination of aquatic environments;

In addition to these environmental protection act requirements, most jurisdictions have programs in place requiring vehicle tires to be recycled.

With respect to substances of concern, while provincial and federal statutes apply to many ELV materials and theoretically prevent the release of potential contaminants into the environment, these requirements are sporadically enforced.

For example, most provincial provisions related to ozone depleting substances have been in place for over a decade. Some businesses process thousands of ELVs annually with no treatment or proper removal of ODS. ARC is not aware of a single charge or conviction of an ELV recycler in Canada in the last decade related to violations of ODS requirements.

The inability of various governments to enforce existing environmental requirements is partially a function of resourcing issues and other priorities, but it also reflects the fact that the proper regulatory mechanisms to address ELV processing have not been established.

### **Specific Government Initiatives Related to ELV Processing:**

#### **Federal Government:**

##### ***Mercury:***

In December 2007, the federal Minister of the Environment published a notice under the *Canadian Environmental Protection Act* (CEPA) requiring vehicle manufacturers and steel mills to prepare and implement pollution prevention plans do deal with the release of mercury from mercury switches in end-of-life vehicles. The Switch Out program financed by the CVMA and Canadian steel Producers Association (CPSA) responds to that requirement.

##### ***Ozone Depleting Substances: Proposed EPR Regulations***

In 2009 Environment Canada announced its intention to pass regulations to manage ozone depleting substances and their halocarbon alternatives. The

proposed regulations would create an extended producer responsibility program for managing these refrigerants. Initial proposals by Environment Canada include requirements for vehicle manufacturers to implement programs to recover refrigerants from end-of-life vehicles. Environment Canada met with vehicle manufacturers and automotive recyclers in May 2011 to discuss this issue but the timing of implementation and exact nature of industry obligations has yet to be determined.

### **Maritimes:**

Vehicle recyclers in Prince Edward Island and Nova Scotia are required to be registered with the government departments. The PEI *Automobile Junk Yard Act* creates certain site restrictions related to the location of automotive recyclers (i.e. proximity to schools, etc.) but it does not establish operating standards for registrants. In Nova Scotia salvage yard operators are required to obtain operating permits from the Ministry of the Environment.

### **Quebec:**

Quebec requires automotive recyclers to obtain a certificate of authorization under the *Environmental Quality Act*. Operators must obtain municipal approvals to operate sites and comply with a number of EQA requirements regarding how certain materials are handled. As in other provinces, however, the extent of compliance with respect to various EQA requirements is uneven throughout the sector.

More recently the Quebec government has accelerated its approach to EPR initiatives. Currently, EPR programs are in place for mercury switches and used oil and oil filters with plans to add programs for used tires and automotive electronics in the near future. The Quebec Action Plan on Residual Materials Management Policy calls for the government to establish a list of priority materials for inclusion under its EPR framework<sup>8</sup>. Given that a number of vehicle components are subject to such programs, there is general agreement by auto manufacturers and the ELV processing sector that government policy needs to look at end-of-life vehicles (ELV) holistically.

### **Ontario:**

In Ontario derelict vehicle sites are exempt from *Environmental Protection Act* requirements to operate under a certificate of authority as a waste management facility. Automotive recyclers are technically required to comply with EPA requirements related to hazardous substances such as ozone depleting substances and used oils. In practice, however, EPA requirements which do apply to ELV processors are not uniformly enforced across the sector.

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<sup>8</sup> Québec Residual Materials Management Policy – 2011–2015 Action Plan

In 2009, the province signaled its intent to include ELVs as a designated material under a reformed *Waste Diversion Act* (WDA). While the government was considering a number of changes to its waste diversion framework, its proposals would effectively require the management of ELVs under an extended producer plan similar to the way in which waste electronics are currently managed in Ontario.

Subsequent to the government's announced intention to introduce *Waste Diversion Act* amendments in 2009, it experienced controversy in the summer of 2010 over fees related to the management of hazardous wastes under an existing WDA program. The eco-fees controversy appears to have delayed planned WDA amendments and reforms.

### **British Columbia:**

In British Columbia vehicle dismantlers must develop and report on environmental management plans as per the requirements of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation. It is mandatory for plans under this regulation to address how the following wastes are managed:

- ozone depleting substances and other halocarbons;
- oils, brake fluids, solvents and other hydrocarbons;
- antifreeze;
- lead and lead-acid batteries;
- waste tires;
- mercury switches; and
- wind shield washer fluid.

Vehicle dismantler plans must be approved by a qualified professional and describe how wastes are stored, treated and recycled or disposed of in accordance with provincial Environmental Management Act regulations. Plans also need to identify processes utilized to minimize the discharge of wastes to the environment and include contingency plans related to procedures to be followed in the case of emergencies.

The BC requirements related to Environmental Management Plans for vehicle recyclers have been implemented fairly recently with plans first required in September 2008. It is not entirely clear, at this point, how uniform compliance is with the vehicle dismantling regulation.

## Current Regulatory Trends Analysis

The current regulatory environment in Canada with respect to ELVs is characterized by two trends: 1) the long-standing ineffectiveness of environment protection act substance related requirements to be uniformly enforced in the ELV processing sector; and 2) an increased interest on the part of governments to utilize extended producer responsibility management plans to deal with ELV related issues.

In the view of the ARC, it would be much more effective in terms of both cost and environmental consequences to address problems in the sector by developing a legislative framework to enforce a common processing standard rather than implementing extended producer responsibility (EPR) programs for ELVs. In fact in the view of the ARC, EPR legislative initiatives for ELVs in the absence of a commonly enforced processing standard will never be successful.

While this conclusion is slightly at odds with current trends in government waste management initiatives, it should be noted that the issues associated with ELVs are significantly different than those associated with other waste diversion programs. Unlike many other materials designated under waste management frameworks, ELVs have high value. They are currently being recycled at rates that exceed most formalized waste management programs in Canada. They do not need to be diverted from landfill, but the negative consequences of ELV processing do need to be addressed.

The creation of a common processing standard with respect to ELVs is a key feature of ELV management programs around the world. It is a key element of the EU directive on ELVs and an aspect of the Japanese recycling framework where all vehicles are dismantled with ozone depleting substances properly removed prior to being returned to manufacturers for recycling.<sup>9</sup>

### *Addressing Environmental Standards through EPR requirements*

While EPR waste diversion schemes vary, typically under an EPR waste diversion framework, product manufacturers are assigned responsibility for designing and implementing a plan to manage products or packaging produced and sold by those manufacturers.

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<sup>9</sup> Articles 5 and 6 of the EU Directive on end-of-life vehicles contain a number of provisions requiring member states to ensure that all end of life vehicle are treated by authorized or registered facilities and that such facilities remove hazardous substances and store and process materials in accordance with environmental standards. For example, Article 6 (3)(b) states “hazardous materials and components shall be removed and segregated in a selective way so as not to contaminate subsequent shredder waste from end-of life vehicles;”

In the context of a well developed recycling market for ELVs, this approach means that the businesses that actually have experience recycling vehicles are subject to a waste management plan developed by businesses that have had, prior to the assignment of EPR responsibilities, little historic involvement in the management of ELVs.

In the view of the ARC, the EPR approach of assigning end of life responsibility for vehicles to original equipment manufacturers and first importers would likely result in significant economic dislocations in the ELV processing sector, without necessarily improving overall environmental performance in that sector.

Given that a diverse group of businesses have established a competitive system that is already capturing a high percentage of ELVs, the ARC believes that it would be less risky to reform the existing market-based system rather than to design a new system.

The principle objective of most waste management programs is to divert materials from landfill. EPR waste management plans are typically financed by assigning producers and first importers the responsibility for the design and operation of such programs. Usually a government agency or independent waste diversion body will approve such plans.

One of the important characteristics of such plans is the fact that environmental processing standards are enforced under the plan through means of commercial contracts. Plan operators ensure that the products it collects are processed in accordance with acceptable standards by allocating products to processors who agree to process the product in accordance with the plan's standard. This system can work relatively well for products with negative recycling value (i.e. products where the cost of collecting and recycling the product exceeds the value of the materials that can be recovered) because nobody else, other than those being paid under the plan, is interested in collecting or processing the material.

ELVs, however, are not a negative value recycling product. Implementing an environmental processing standard for ELVs through an EPR program would require the plan operators to provide financial incentives to draw product from those operators who are currently ignoring existing environmental standards. In the case of ELVs these financial incentives would likely need to be fairly significant.

Ontario's waste electronics program, implemented in 2009 has already experienced problems in this area. A number of businesses simply chose to recycle electronics outside the program plan. These businesses do not receive payments under the plan, but nor do they recycle materials in accordance with the plan's contracted environmental standards. Recycling businesses that participate in the program plan are placed at a disadvantage by these "outside

the program” players who are unburdened by any processing standard or reporting requirements.

Given the value of ELVs, this issue would be even worse for ELV management than that for waste electronics. Businesses that are currently profiting from pollution would have absolutely no reason to improve their environmental standards and, to date, provincial waste diversion frameworks do not contain any regulatory mechanisms that would force an entity operating outside its plans to change their practices. This is why in the absence of a commonly enforced processing standard for ELVs moving forward on an EPR waste diversion program will be counterproductive and potentially disadvantage responsible processors in the sector.

Ontario waste electronics plan highlights another problem with EPR waste management schemes. In the WEEE plan, the industry steward responsible for processing electronics waste, set quotas and limited the number of materials individual electronic recyclers could actually process. It did so to minimize its processing costs, but the creation of a monopsonist buyer for all waste electronics seriously distorted market place activity, damaged existing recyclers and undermined the efficiencies associated with market competition in the sector.

Waste management monopolies may make sense for materials that have limited recycling value and a poorly developed recycling market. However, creating a monopsonist buyer for a well-established recycling sector like the one that exists for ELVs runs the risk of seriously distorting that market and potentially eliminating the efficiencies created by free market competition.

The presence of for profit recycling businesses that are not complying with environmental standards is a significant challenge for traditional waste management programs where some form of incentive or payment is usually utilized to encourage diversion of a material from landfill. In the case of ELVs, given current market dynamics the cost of such incentives would likely be very expensive.

Conversely, if a common environmental standard is enforced, the need for an EPR waste management designation for ELVs may become redundant as the private sector recycling market will drive very high recovery rates.

The ARC believes there is a much more effective and cost sensitive way to ensure that ELVs in Canada are recycled in an environmentally responsible manner than designations under existing waste management plan acts.

## **The Benefits of National Vision for an ELV Environmental Management Standard**

Currently, ELV processors throughout Canada are subject to a patchwork of similar but inconsistently applied environmental standards. A national approach to environmental processing standards for ELV processing would minimize the impact of ELV processing on the environment thereby contributing to the protection and preservation of natural resources and the quality of our water, soils and atmosphere.

Secondly, a national approach would minimize the likelihood of any market distortions associated with having different environmental standards in one provincial jurisdiction compared to the next. Although the transportation costs related to ELVs are not insignificant, the effective enforcement of ELV environmental standards in one jurisdiction could be undermined by a lack of enforcement related to those standards in another jurisdiction.

### **Core Elements of a national approach to ELV EMS**

1. All end-of-life vehicle processors will be subject to a common decommissioning standard codified in provincial law to minimize environmental discharges and ensure proper treatment of substances of concern (see proposed EMS standard for ELVs below).
2. All businesses (dismantlers, crushers and shredders) recycling ELVs will require a license, authorization or certification under provincial law:
  - a. Only authorized businesses will be eligible to dismantle ELVs;
  - b. Only authorized businesses will be eligible to crush or shred ELVs (there could be different classes of license for dismantlers, crushers and shredders);
  - c. Authorized ELV processors will be subject to audits and reporting requirements to ensure compliance with the decommissioning standard;
  - d. Authorized ELV processors will be required to comply with other relevant local, provincial and federal laws and regulations.
3. Any business or individual engaged in ELV recycling that operates without an authorization will be subject to fines and penalties.
4. Any business that crushes, shreds or processes an ELV that has not been de-commissioned by an authorized ELV dismantler will be subject to fines and penalties including potential loss of license.
5. Licensing and enforcement would be financed primarily by registration or licensing fees paid by authorized recyclers (e.g. annual fee and per

- vehicle fee) - no consumer recycling fees on vehicle sales would be required or permitted.
6. Consumers or vehicle owners would have the ability to drop an ELV off at an authorized recycling facility at no charge.
  7. Each province or region will establish an oversight body to compile information and report annually on the number of ELVs recycled each year along with a breakdown of materials disposition and recycling outcomes.
  8. A national not-for-profit coordinating body with representation from vehicle manufacturers, vehicle recyclers and will be established:
    - a. To compile provincial information and report on the state of ELV recycling nationally;
    - b. To conduct research on future potential improvements to ELV recycling.

### **Proposed ELV EMS Environmental Standard**

Building on the provisions of the National Scrappage, the following elements are proposed related to the mandatory ELV decommissioning standard:

- All end-of-life vehicles must have the following materials removed prior to crushing, shredding or processing for metal recycling:
  - fuels, including gasoline, propane, natural gas, ethanol and diesel;
  - oils and fluids, including engine oil, transmission fluid, brake fluid and power steering fluid;
  - antifreeze;
  - windshield washer fluid;
  - refrigerants;
  - lead-acid batteries; lead battery cables and lead tire weights;
  - mercury switches;
  - non-lead acid batteries (including nickel-metal hybrid and lithium-ion batteries);
  - oil filters;
  - fuel filters;
  - tires.
- Any materials that cannot be resold for reuse must be stored, transported and processed in accordance with provincial and federal requirements for such materials.
- All businesses that dismantle, crush or shred vehicles must operate in accordance with provincial and federal requirements regarding release of contaminants and spill management (non-compliance would be subject to penalties including loss of authorization):

- different operating site requirements may be established for dismantlers, crushers and shredders;
- businesses and individuals would be eligible for authorization in all categories;
- personnel must be appropriately trained and licensed.

### **Auditing and Reporting: ELV Processors**

- All businesses licensed to dismantle, crush or shred vehicles, would, as a condition of their license, be subject to audits to ensure compliance with the de-commissioning standard and reporting requirements.
- All businesses authorized to dismantle, crush or shred vehicles, would be required to maintain records related to the number of vehicles processed and the associated quantity of materials disposition.
- All businesses licensed to dismantle, crush or shred vehicles would be required to report annually on the number of ELVs processed and provide information on materials disposition as required.

### **Performance and Reporting**

- Administrative oversight bodies would produce an annual report identifying the number of ELVs processed in each region annually along with a breakdown of materials disposition including:
  - volumes of materials reused or resold;
  - volumes of materials diverted for recycling.

### **Financing**

- The costs of regulation would be financed primarily through licensing fees paid by those businesses, dismantlers, crushers and shredders, required to apply for authorization under the new regulatory framework.
- Licensing fees could potentially include a base amount and a per ELV fee so that a registrant's licensing fee was partially a function of the number of ELVs the business processed each year.
- Other revenue sources could include administrative penalties imposed by oversight bodies on registrants for violations such as failure to submit reporting information on time or breaches of the decommissioning standard.

## **Oversight Bodies and National Coordination**

In Ontario, the ARC affiliate, the OARA, proposed the creation of an independent body under that province's *Safety and Consumers Statute Administration Act, 1996* (SCSAA), to administer the new ELV processing standard. Under that statute the Ontario government has the authority to designate administration of designated statutes or regulations to independent not-for-profit corporations known as administrative authorities.

Whether licensing ELV processors in each jurisdiction would warrant the creation of a stand alone oversight body would have to be determined on a jurisdiction by jurisdiction basis. The important element from the perspective of a national approach is that ELV processors in each jurisdiction be held to the common standard and that legal mechanisms exist in each jurisdiction to address ELV processors that refuse to meet common processing standards.

## **Conclusion**

As stated in the introduction, the ARC believes that a national approach to managing ELVs is both timely and necessary.

As various levels of government consider ELVs in the context of waste management policy initiatives, it is vitally important that initiatives address the unique characteristics of the existing ELV recycling marketplace.

An outcomes-based approach to waste management leads in one direction: the implementation of common decommissioning standard for ELV processors.

The implementation of other ELV waste management obligations in the absence of addressing this fundamental problem with ELV recycling will do more harm than good. Businesses that are currently complying with existing environmental standards will face additional obligations and businesses that are currently profiting from pollution will continue to be ignored.

In the view of the ARC, a commitment from the Council of Canadian Ministers of the Environment to agree in principle to the adoption of common decommissioning standard for ELV processors would be a major step forward in the evolution of the sector. Such a decision would address the most pressing problem in ELV recycling today and is an essential prerequisite to any potential further improvements that could be considered in relation to ELV recycling.

This approach builds and expands upon the existing competitive dynamic in the ELV recycling marketplace and will ensure that environmental operating standards are improved in a cost effective manner across the sector. Applied across the country a national approach will result in a consistent, effective and efficient end-of-life vehicle management program in Canada.