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Opportunities and challenges for the auto recycling industry

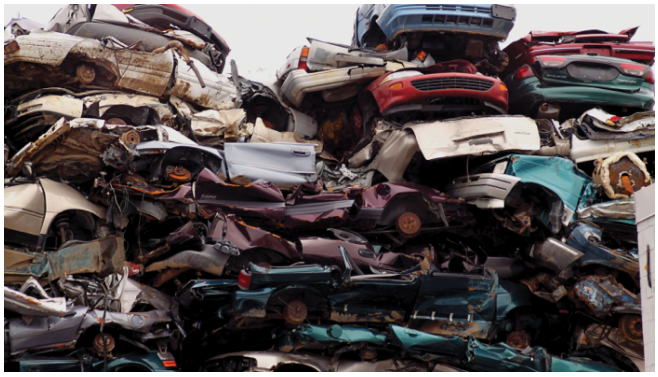
By Steve Fletcher March 15, 2022

The auto recycling industry, like all sectors of the overall automotive industry, is an ecosystem of businesses that interact with each other and with other parts of the overall auto supply chain in what was and is probably the best example of the circular economy.

As I approach my thirtieth year in the auto recycling industry, I join many of my industry colleagues in observing that I have probably seen more industry changes in the past five years than in the previous 30. The last two years, driven by the COVID-19 pandemic, have been marked by even more upheaval - and the future looks just as full of change for the industry.

Before I get into those changes and, more importantly, the implications of change and what the future holds, here is a bit of background on what I constitute to be the auto recycling industry.

The auto recycling industry, like all sectors of the overall automotive industry, is an ecosystem of businesses that interact with each other and with other parts of the overall auto supply chain in what was and is probably the best example of the circular economy. End-of-life vehicles (ELVs) are not waste - they are assets that need to be managed, oftentimes solely by market forces. They do have hazardous wastes in them that can be a problem, but the professional industry has evolved to understand how to best manage these resources and waste byproducts.



End-of-life vehicles are not waste – they are assets.

Navigating different auto recycling ecosystems

There are essentially two types of auto recyclers out there, but a lot of overlap exists between the two, and even within a business, as the price of scrap, vehicles, and their parts fluctuates.

There are businesses that look at ELVs as a collection of parts that can be reused, with a bit of material (almost exclusively metals) that can be recovered profitably. The other class of business is one that looks at an ELV as just a collection of materials - again, almost exclusively metals, and they do not have the capacity, knowledge, or plans to sell parts.

The Automotive Recyclers of Canada (ARC) and its members operate in the first category - as dismantlers of ELVs and parts sellers. Many members of the Canadian Association of Recycling Industries (CARI) operate in the second category - scrap buyers, processors, and shredders. And, of course,

lots of businesses do both, and buy and sell amongst the different types of businesses, for added complexity.

In Canada, those auto recycling ecosystems are largely left on their own when it comes to direct government intervention, which is not always the case in other countries. And, like many sectors that have gone unregulated, there is a significant underground economy in the auto recycling field with unlicensed businesses and individuals operating without regard for taxation, health and safety, theft, the environment, etc.

For both auto dismantlers and scrap processors, they work off of a simple calculus when it comes to ELVs: can they generate enough revenue (parts and materials) to pay for the ELV and any transportation back to the processing facility (if it isn't delivered), and pay for the appropriate level of preparation of the vehicle (i.e., de-pollution, VIN de-registration) so those parts and materials can be removed, stored, sold, and shipped profitably, while simultaneously investing in people, training, equipment, reporting, etc.?

It's a simple calculus, but there are a myriad of ways to manage revenues and expenses - and plenty of ways that it can go wrong.

You can't talk about the state of the industry without looking at the impact of the pandemic. Most auto recyclers remained open during shutdowns, as they are deemed essential businesses in their role as part of the automotive repair supply chain. Many pivoted to online and curbside pickup, with the restrictions accelerating trends towards digitization of their parts inventories, more online sales and marketing, and an understanding that a clean, professional presentation is mandatory these days.

The following issues or trends had a positive impact on the auto recycling industry: supply chain disruptions and delays for new and aftermarket parts; vehicle owners needing/wanting to hold on to their vehicles longer; and robust and sustained scrap prices including enormous increases in the

platinum group metals within catalytic converters.

Let's look at them individually, but also how they interact with one another.

Local supply chains became all the rage during the pandemic - the closer suppliers and buyers are to one another the less likely that borders, distance, and cost play a role in selecting a part. Recycled auto parts from local vehicles are always locally available. More and more repairers, insurers, consumers, and even dealers turned to local auto recyclers as sometimes the only suppliers of parts that were suddenly held up in the supply chain.

As vehicle owners held on to their vehicles longer due to economic uncertainty or the cost and availability of a suitable replacement vehicle, they became much more interested in repairing their older vehicle - and auto recyclers were once again sometimes the only suppliers of those parts.

High and sustained scrap prices, both in the ferrous, non-ferrous, and platinum group metals generally reward both the dismantler and the scrap processor. High prices aren't always a good thing for the entire scrap supply chain, but relatively consistent prices are - and given the global stops, starts, and uncertainty, metal price fluctuations have not been as dramatic as they could have been.

The dramatic rise in the platinum group metals within catalytic converters is another story. These huge gains have brought unprecedented catalytic converter theft and ensuing attention from the media, law enforcement, and governments at all levels. More and more vehicles are showing up at auto recyclers and scrap processors without the catalytic converter in place, and this dramatically changes the economics of successfully processing that vehicle.

Governments have tried to crack down on this illegal activity by putting increasingly stringent requirements on scrap buyers - they must understand who they are buying from, where that catalytic converter may

have come from, and not aid and abet the underground economy. That is a story that has still not played out.

Fewer available scrap vehicles has led to a dramatic increase in the costs associated with acquiring vehicles for inventory.

Pandemic-related challenges

There are a number of factors that have challenged auto recyclers during the pandemic: fewer miles driven means less wear and tear on a vehicle and therefore less need for repairs - in addition to fewer accidents requiring repairs. Auto recyclers have had fewer parts available with the reduction in accidents and total loss vehicles, and owners have held onto their vehicles longer, which meant fewer ELVs available.

Those last two issues - fewer total loss vehicles and fewer "scrap" vehicles - have led to a dramatic (30 percent) increase in the prices to acquire vehicles for inventory. That is probably the number one issue facing auto recyclers - fewer vehicles available, combined with everyone chasing after the same vehicles, leads to higher prices.

There are lots of opportunities to sell parts and scrap, but you have to buy those ELVs right or losses are inevitable. This is where the underground economy scrappers play a big negative role - they are incentivized to buy any vehicle they can, but they are not subject to the same rules and economics of the regulated industry. It's pretty easy to make cash profits when you cheat the system or deal in stolen property

Electric vehicles present new hurdles

The electrification of vehicles is another enormous threat to the existing industry, driven by governments, OEMs, new competitors, new supply chains, new mandates, and bans, as well as plenty of money, R&D, and policy making. The intersection of electric vehicles (EVs) and auto recycling is such a dynamic subject, and it is worthy of its own article regarding the changes that are underway now, and, more importantly, that need to be undertaken in the near future.

But for now, it is relevant to understand two things about EVs. First, just like internal combustion engine (ICE) vehicles, every EV will have a proper home at end of life - they are just too valuable to ignore (and soon will be too popular to ignore). The Automotive Recyclers of Canada and its members are preparing for this future. Second, the media loves to report about the "tsunami" of EV batteries that are destined for landfills and that only 5 percent of lithium-ion batteries are recycled at end of life. This is not true.

EV batteries are not waste, they are assets that more and more industries are clamouring for. And that 5 percent metric? A 20-year-old study that looked at all lithium batteries - mainly single-use small household batteries. EV batteries are big, heavy, and won't accidentally end up in the garbage or the Blue Box. OEMs, new industries, supply chains, reusers, remanufacturers, second life options (i.e. energy storage outside of a vehicle), and final recyclers are all starting to work together to create new ecosystems to manage this valuable resource.

As future vehicles change to meet more stringent GHG reduction requirements, the composition of those vehicles change with more plastics and hard-to-recycle materials like carbon fibre. At the scrap level, that changes the potential revenue stream of extracted metals.

For many years now, vehicles have gotten heavier because they have gotten bigger (i.e. pickups and SUVs), but if we see sustained high gas prices, more

and more people will opt for smaller, more fuel-efficient vehicles - and that can mean less metal at end of life. The balancing act to those vehicle material changes often means more non-ferrous metals (i.e. lighter aluminum and more copper for electrification), and more computer parts - which have higher value as parts, if they can be resold.

Plastics in ELVs are gaining the attention of the federal government as it commits to zero plastic waste goals. ARC is finalizing a road map study regarding plastics from ELVs for Environment and Climate Change Canada, due to be released in April. This will map out the opportunities and the very significant challenges to removing plastics from ELVs.

Auto recycling has existed successfully since the first vehicles rolled off the production lines well over 100 years ago. This success has been built on an entrepreneurial spirit, a love of automobiles, and a burning desire to meet the needs of the changing automobile and the evolving automotive ecosystem. We expect to be around for another 100 years. ELV recycling will look different, but rest assured every vehicle in Canada will meet a responsible end of life because this sector always asks, "What's next?"

Steve Fletcher is the managing director of the Automotive Recyclers of Canada.

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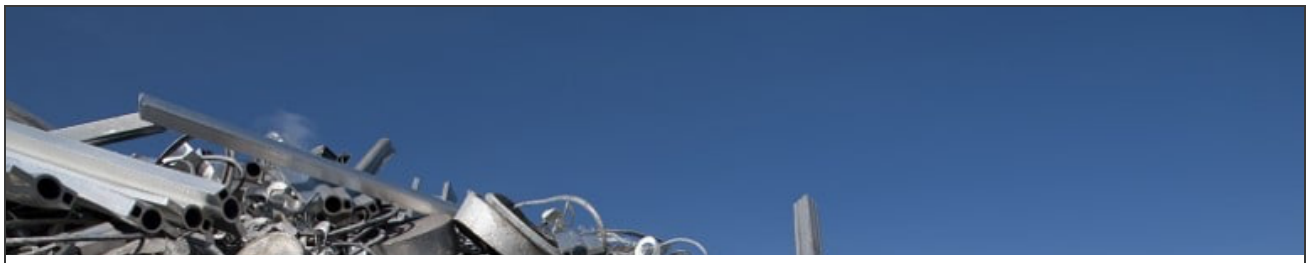

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