Reducing Automotive Shredder Residue from Landfill

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**Goal**

To reduce the amount of ASR, by weight, landfilled each year across the United States.

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**What is ASR, and why is it a Problem?**

Mix of non metal components of an end-of-life vehicle (ELV) car that remains after:

- plastic, fabric, rubber, wood, wires, metal, miscellaneous (dirt, sand, fines)

Damaging to environment:

Across United States:

- 2-3 million tons of waste produced
- $130 million a year in landfilling costs

Landfill space is becoming very limited

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**Methodology**

- EOL Vehicle → Auto Shredders and general shredding companies
- Can the facilities do more?
  - Yes → Sell to Energy Recovery Companies
  - No → Shredders pay for ASR and waste to be dealt with
- Energy Recovery
- Accommodated companies will use the ASR and profit most
- Co-combustion and steam generators
- Crude Oil → Profit
- Anaerobic Thermal Reclamation
- Natural Gas and Electricity
- Landfill

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**Results**

Energy recovery from ASR is a viable and profitable solution

- Estimated > $1.2 million in revenue generated per year
- Estimated 300,000 tons of ASR can produce 180,000 megawatt hours of electricity

Cost to implement this process is currently too high for companies unequipped to process ASR

With landfill costs rising and space decreasing, and environmental concerns growing, this process will need to be implemented in the next 15 years

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**References**


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