



Today's Scrap Tire Markets: Status, Trends and Projections

8th Scrap Tire Recycling Conference

Dec 4, 2019

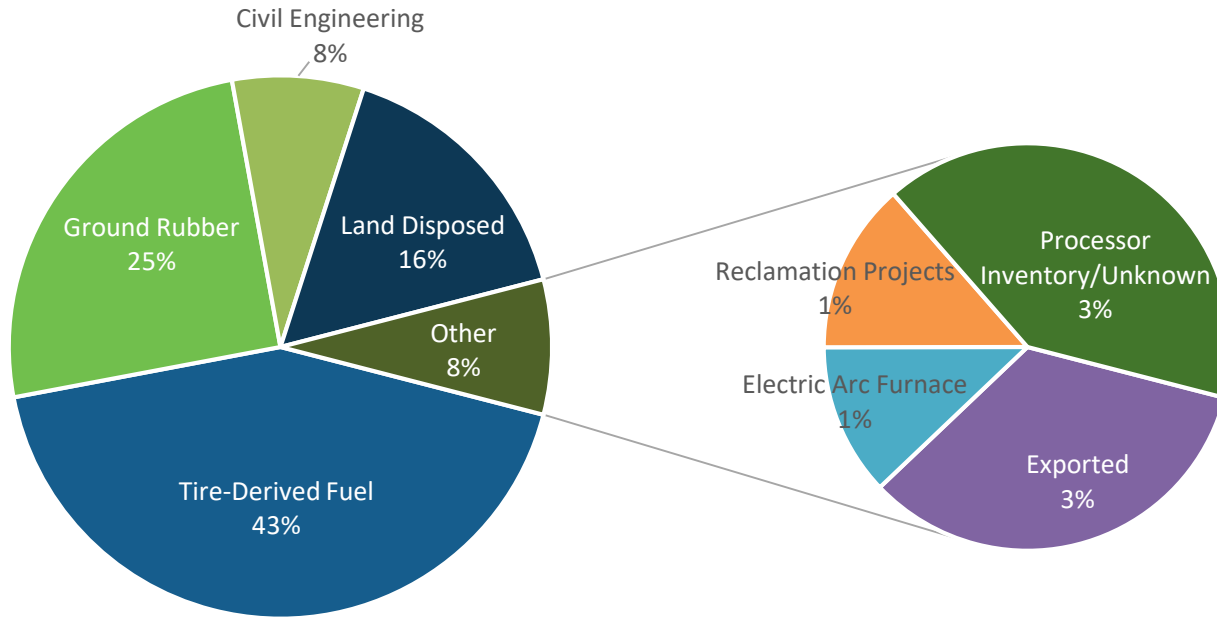
What we will cover

- Brief review of scrap tire markets: status, trends, projections
- Challenges and opportunities for markets to advance the circular economy
- Need for greater collaboration and partnerships to achieve our long-term vision:
 - 100% sustainable end use markets

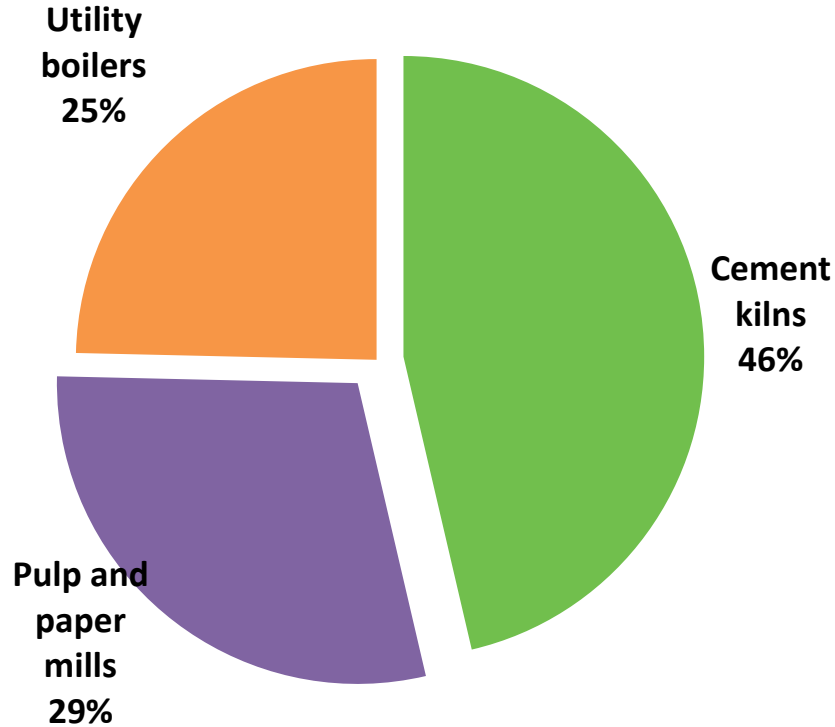
MARKET STATUS AND TRENDS

U.S. Scrap Tire Disposition 2017

(percent of 4,189 thousand total tons generated)



U.S. Tire Derived Fuel Markets 2017



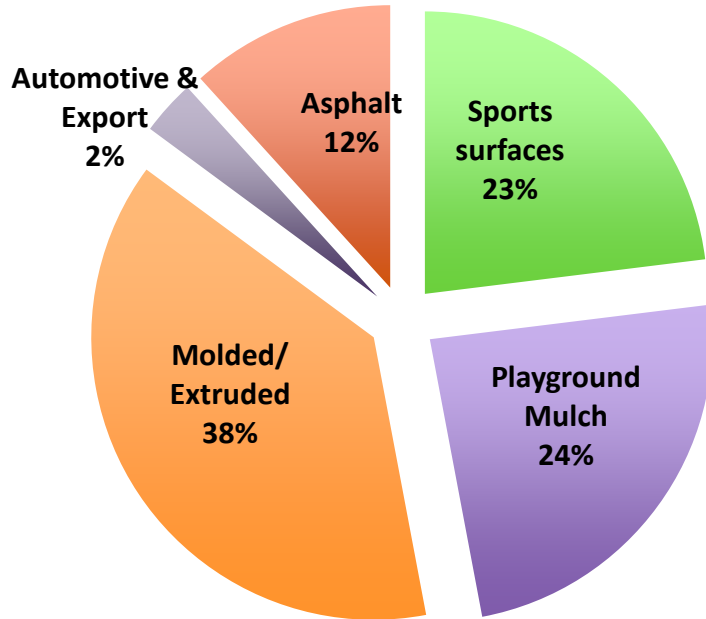
Did you know?

Total scrap tires diverted to TDF market:

1,736,340 tons or about 106 million tires

U.S. Ground Rubber Markets 2017

(percent of total pounds of scrap tires consumed in market)



Did you know?

Total tire rubber consumed in ground rubber markets: *about 1,340,000,000 pounds*¹

Total scrap tires diverted to these markets: *About 1,013,320 tons or about 62 million tires*

¹This value represents the weight of processed ground rubber (with wire, fluff and agglomerated rubber removed) that is consumed in ground rubber end-use markets. In contrast, the data represented in other areas of this report refer to the weight of whole tires diverted to all scrap tire markets, including ground rubber.

Ground Tire Rubber – Molded and Extruded

- Dominated by smaller sized, entrepreneurial companies.
- They are working hard to grow their markets and identify new and existing products that can use ground rubber including micronized rubber powders.
- We see real opportunity in the automotive sector.
- California's Tire Incentive Program for feedstock substitution is encouraging ground rubber consumption as a cost savings.
- Lack of market development funding is restraining growth.
- Nevertheless, the sector is growing.

Ground Tire Rubber – finely ground

- Tire to Tire recycling is growing. The number of SKUs with recycled content continues to grow.
- Technology including devulcanized materials may allow for higher reuse rates.
- Manufacturers are committed to increasing this presently small market.

Tire Derived Aggregate

- A highly variable market due to project sizes.
- Several real champions pushing to grow this market.
- Opportunities in transportation and stormwater infrastructure.
- May be up, may be down but we see this as rather steady at present with some likely growth since 2017.

Exports

- Exports grew significantly out of California and the West Coast to Japan, Korea and even India.
- Export activity is rumbling on the East Coast but has not taken off.
- The Japan and Korea exports tend to be long term and continue regardless of energy pricing.
- Exporting to India is real! 40% of England's scrap tire arisings are exported to India.
- Rumbblings of market closings.
- Export rates seem to relate primarily to energy prices.

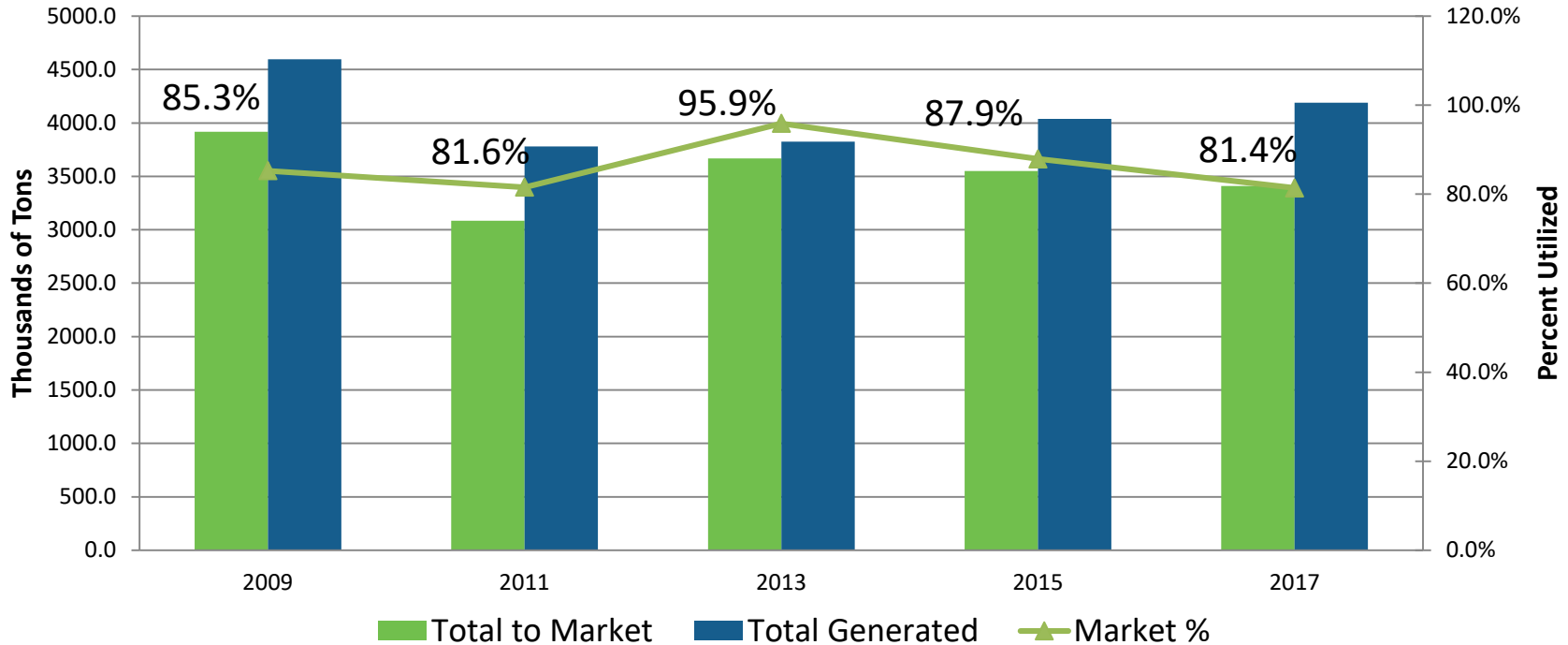
Other Markets

- Pyrolysis hit the market at industrial scale in 2019.
- Over 1 Mil, and possibly up to 2 or 3 Mil (meaning almost 1% of national generation).
- Looking for some breakthroughs: pyrolysis, devulcanization, stormwater infiltration galleries, flexible and porous pavements, mechanical concrete, others?

Markets Overall

- Tire Derived Fuel down
- Ground rubber up
- Tire Derived Aggregate steady or up
- Export – significantly up
- Other – up slightly

U.S. Scrap Tire Market Trends 2009 - 2017



CHALLENGES AND OPPORTUNITIES

Challenges

- Inconsistent definitions of ‘Circular’ and ‘Sustainable’
- Lack of recognition that the terms are relative when applied to products.
- The terms can be absolute when applied to an industry.
- Need for partners around the cycle of circularity.

Opportunities

- Circular, sustainable markets should have better economics.
- Will have lower environmental impact across the product lifecycle.
- Large enough to make a difference.

COLLABORATION

Circular markets require collaboration across the value chain

- Tire and scrap tire industries are not isolated, and are not vertically integrated.
- Rather, the economy has specialists in the phases of the lifecycle of a tire: Resource extraction, manufacture, use, end-of-life, processing into new products for use in the same or other industries.
- Therefore we must work together to reduce the overall industry impact.

Collaboration up and down value chain

Government Oversight



CONCLUSION

Our goal is unchanged

- 100% of annual generation entering sustainable end use markets.
- USTMA will be working with partners to encourage the most sustainable and circular set of market options.

THANK YOU

John Sheerin, USTMA

Director End of Life Tire Programs

jsheerin@ustires.org