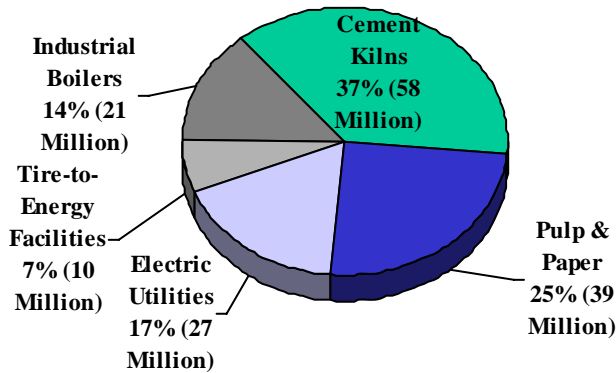


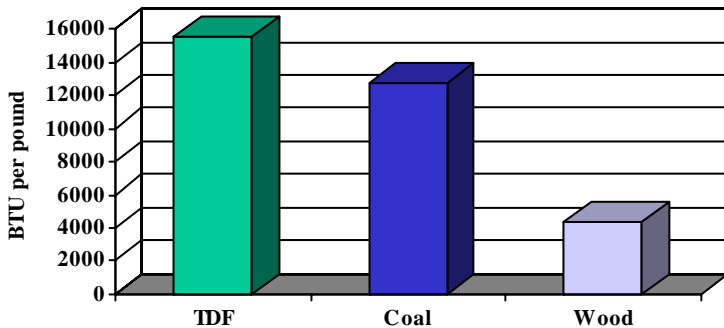
Tire Derived Fuel

Summary

- Rubber Type: Shredded, 1-inch to 2-inches
- Tires Used: 155 million tires used annually for TDF
 - Cement industry: 58 million
 - Pulp and paper mills: 39 million
 - Electric utilities: 27 million
 - Industrial/institutional boilers: 21 million
 - Dedicated tire-to-energy facilities: 10 million



- Energy Comparison
 - Generates up to 33% more energy than coal and up to 220% more energy than wood
 - TDF: up to 15,500 BTU per pound
 - Coal: 12,750 BTU per pound
 - Wood: 4,375 BTU per pound



- Advantages
 - More energy potential per pound than coal or wood
 - Conservation of other resources (coal and wood)
 - TDF produces lower emissions of Sulfur Oxides, Nitrogen Oxides, and total Hydrocarbons than coal.

- Disadvantages
 - Lack of public awareness (general public and public officials)
 - NIMBY syndrome (not-in-my-backyard)
 - Public perception (black smoke looks bad)
- Sources:
 - A Laboratory and Field Evaluation of the Use of Waste Materials in Highway Construction (S.N. Amirkhanian, 1999)
 - U.S. Scrap Tire Markets in the United States: 2005 Edition (Rubber Manufacturers Association, 2006)