



- **PAPER** made up 27 percent (by weight) of the nation’s municipal solid waste (MSW) in 2013 according to the U.S. Environmental Protection Agency (EPA). Depending on the kind of paper being made and mill efficiency, using recycled stock reduces energy use by 25 to 75 percent when compared to using virgin pulp stock. To make a ton of newsprint from virgin pulp requires 30 million Btu; using pulp from used newsprint requires only 10 million Btu per ton.
- **PLASTIC** made up 12.8 percent of the nation’s MSW. Plastic is ideal for recycling because it is

made from fossil energy – about 30 percent oil and 70 percent natural gas. Soft drink bottles (made of polyethylene terephthalate or PET) cost about 98 million Btu per ton to make. Bottles made of recycled PET needs about 12 million Btu per ton. Another high-use plastic that has great potential for recycling is high-density polyethylene (HDPE) used to make items including milk jugs and detergent bottles. The United States produces about three times more HDPE than PET. Recycling one ton of HDPE costs about 22 million Btu. A ton of virgin HDPE costs about the same as a ton of PET.

World Primary Energy Consumption, 2015

COUNTRY / REGION	MILLION TONS OIL EQUIVALENT
North America	2,795.5
United States	2,280.6
Canada	329.9
Mexico	185.0
Central and South America	699.3
Total Europe and Eurasia	2,834.4
Total Middle East	884.7
Africa	435.0
Total Asia Pacific	5,498.5
WORLD	13,147.3

SOURCE: BP Statistical Review of World Energy (British Petroleum, London, 2016)

- **GLASS** made up 4.5 percent of the nation’s MSW. Recycling glass usually begins with color separation followed by grinding the glass into small pieces called cullet. Energy is saved because the cullet melts at lower temperatures than new materials. To make a ton of glass from new materials requires 16 million Btu per ton; less than 15 million Btu are needed to make a ton of glass from cullet.
- **METALS** made up 9.1 percent of nation’s MSW. About 95 percent of the energy needed to produce aluminum from bauxite ore is saved by substituting aluminum scrap. Estimates of the energy costs for extracting a ton of aluminum from bauxite average 250 million Btu per ton; only 12.5 million Btu are needed to produce a ton from scrap. Recycling other metals produces similar energy savings.

SOURCE: EPA’s “Advancing Sustainable Materials Management: 2013 Fact Sheet,” published June 2015 and the U.S. Energy Information Administration, www.eia.gov/state/?sid=SC