



Measuring Success

2019 ARC Conference

Ron Vance

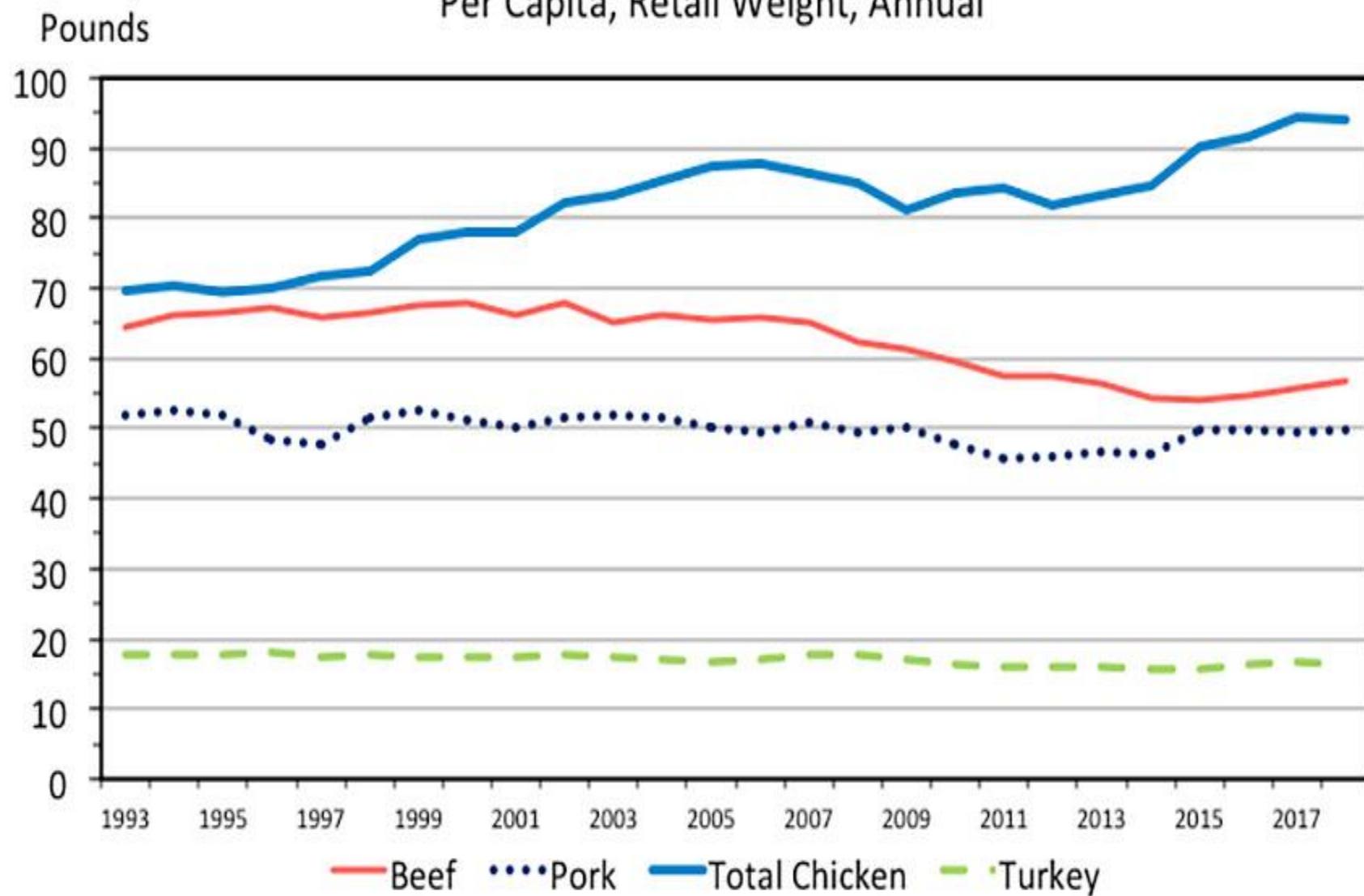
Chief, Resource Conservation Branch
U.S. Environmental Protection Agency

Food for Thought

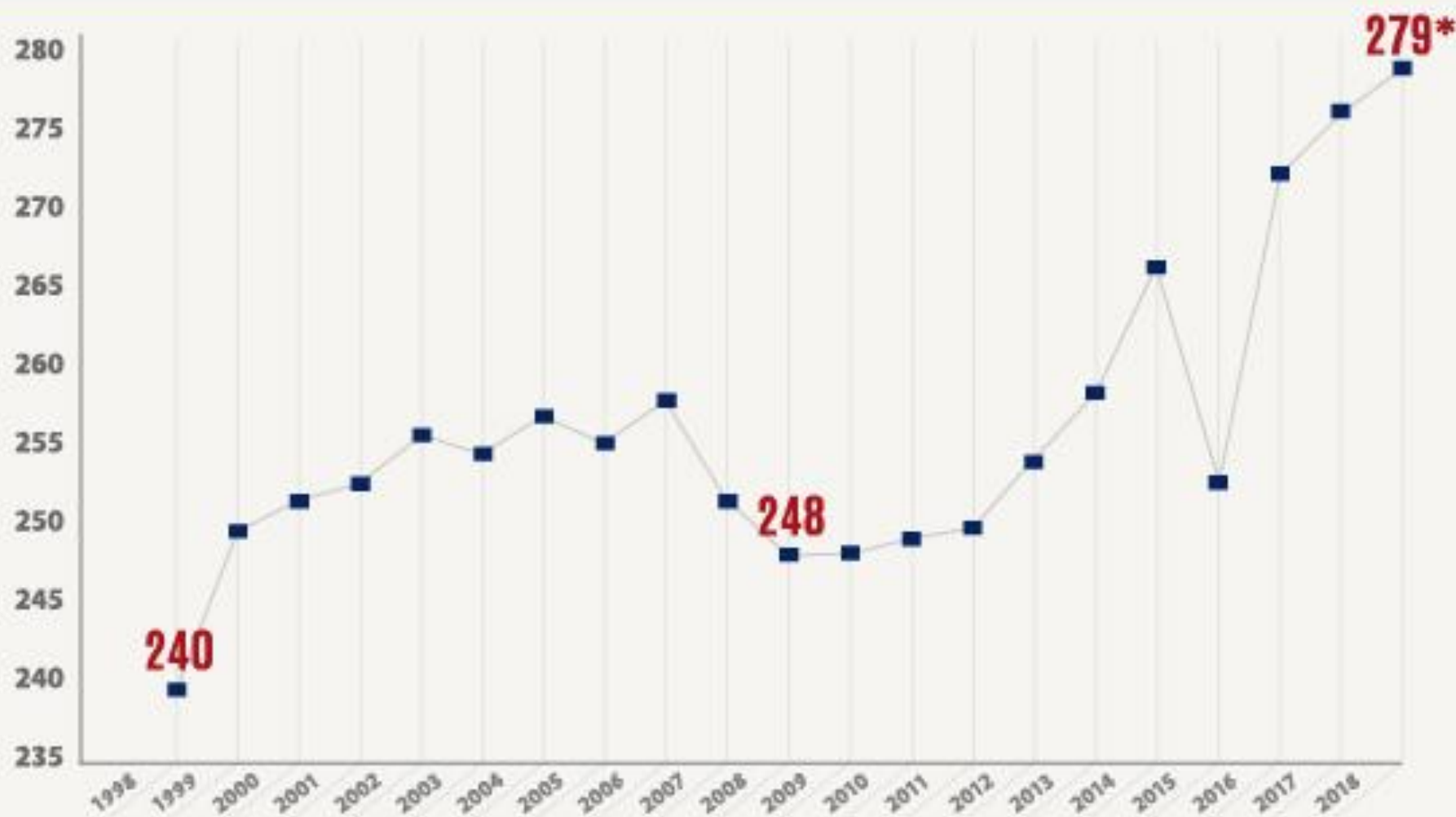


US RED MEAT & POULTRY CONSUMPTION

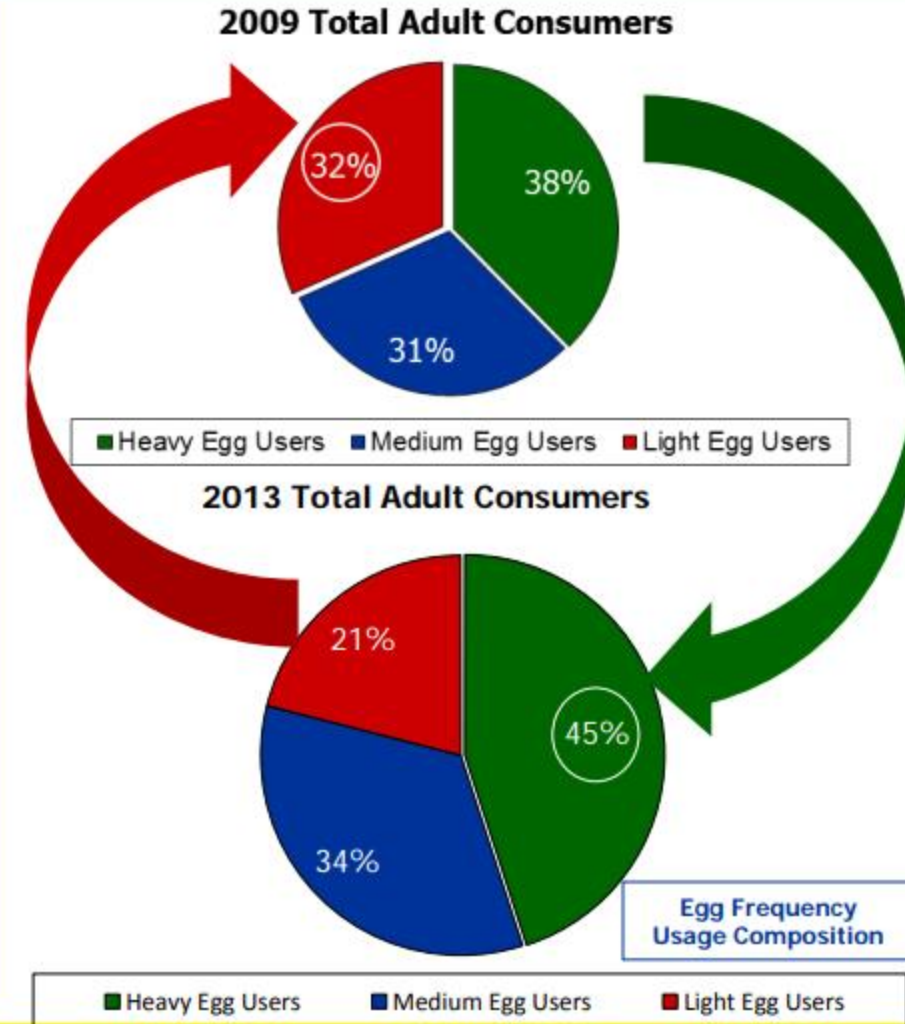
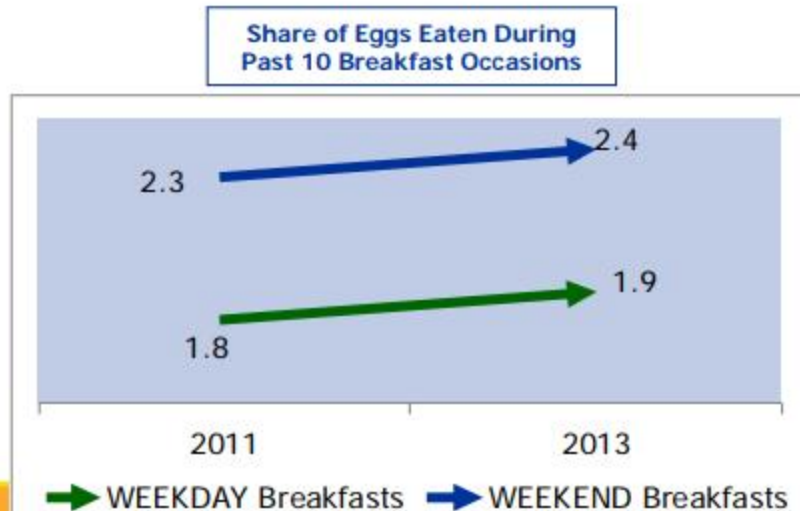
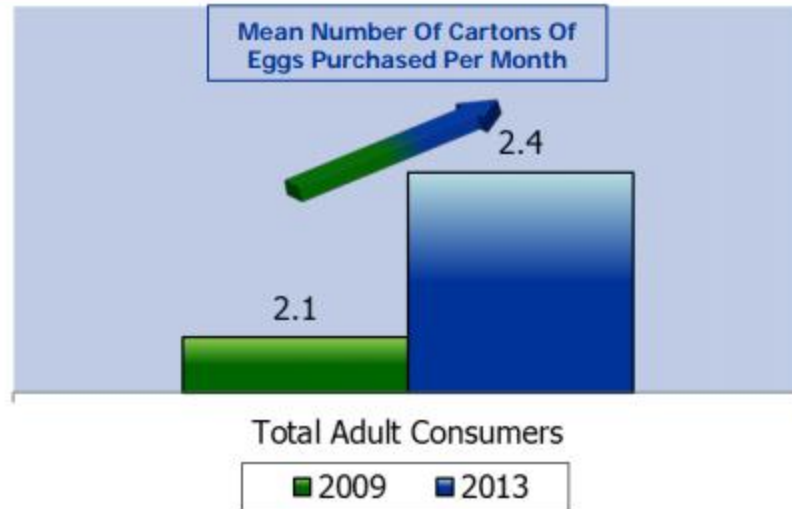
Per Capita, Retail Weight, Annual



U.S. Per Capita Egg Consumption Since 1998



Increased Egg Purchase, Consumption



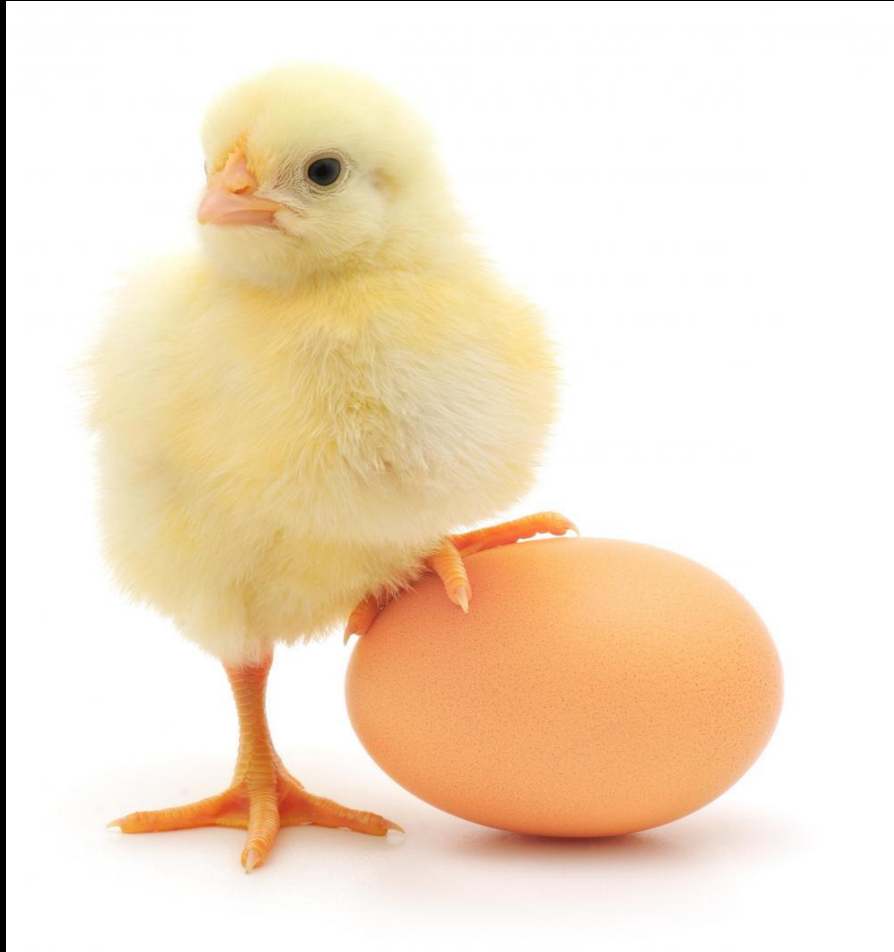
Top Ten Chicken Producing States

- Georgia – 1,313,500
- Arkansas – 1,043,500
- Alabama – 1,033,400
- Mississippi – 807,800
- North Carolina – 766,500
- Texas – 653,500
- Kentucky – 309,900
- Maryland – 300,500
- Delaware – 235,000
- South Carolina – 241,000

Top Ten Egg Producing States

- Iowa – 53,044,000
- Ohio – 27,869,000
- Indiana – 26,491,000
- Pennsylvania – 24,244,000
- California – 16,261,000
- Texas – 14,786,000
- Michigan – 12,646,000
- Minnesota – 9,982,000
- Nebraska – 9,318,000
- Georgia – 9,210,000

Vast Data, But . . .



A question still remains . . .

Which of these came first?

EPA Facts and Figures



Figure 2. MSW Recycling and Composting Rates, 1960 to 2015

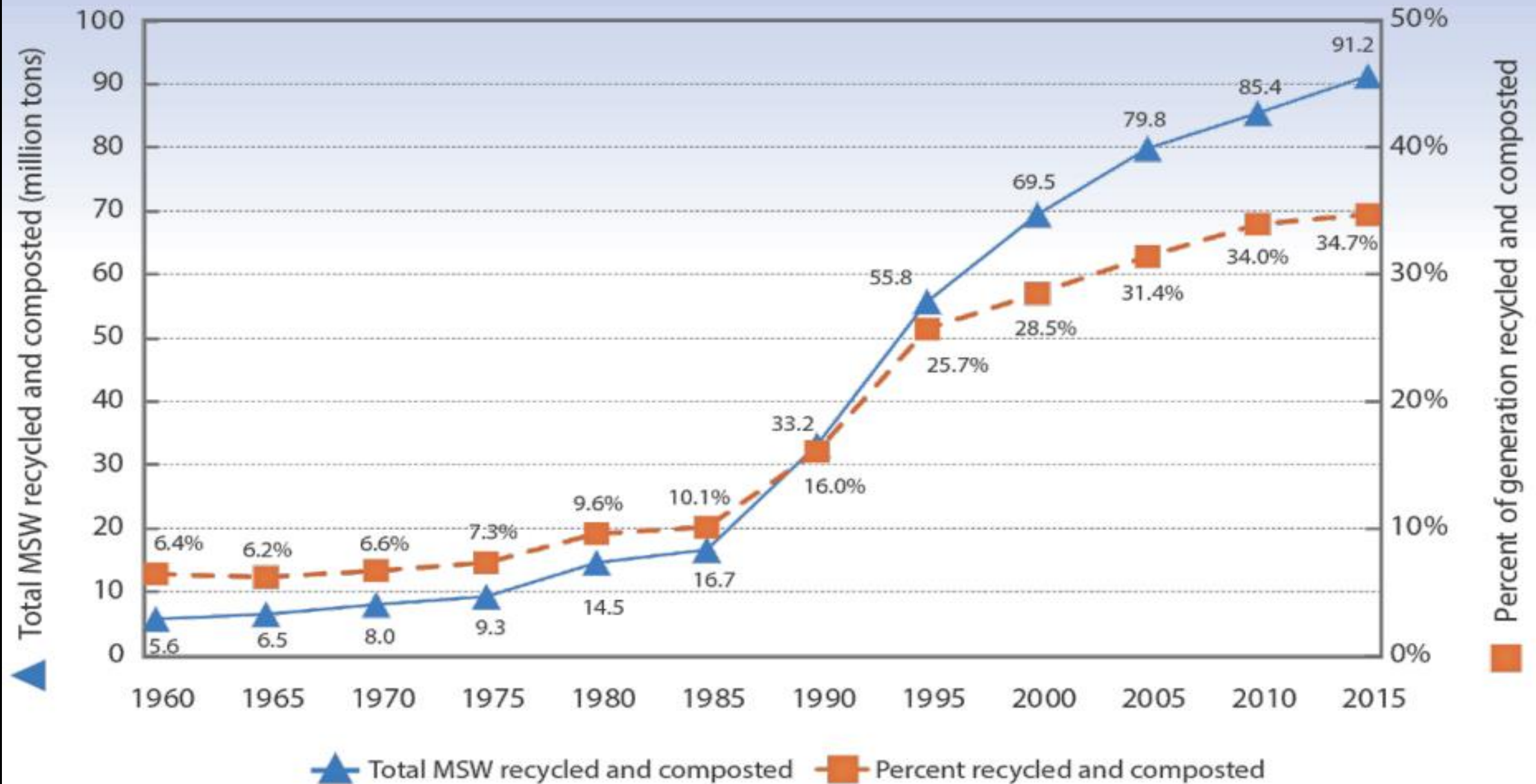


Figure 1. MSW Generation Rates, 1960 to 2015

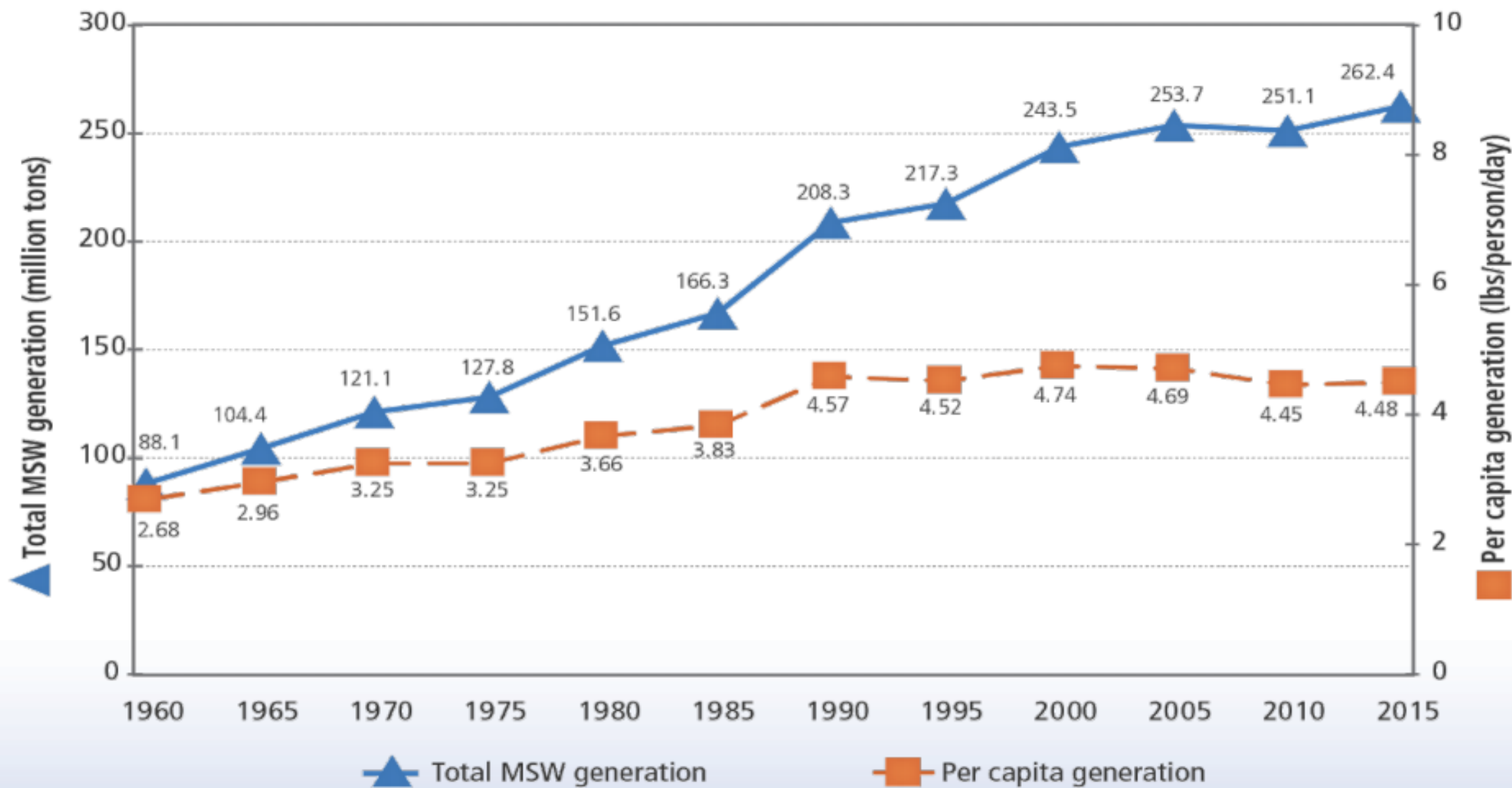


Figure 13. Indexed MSW Generated and Real PCE over Time (1960-2015)

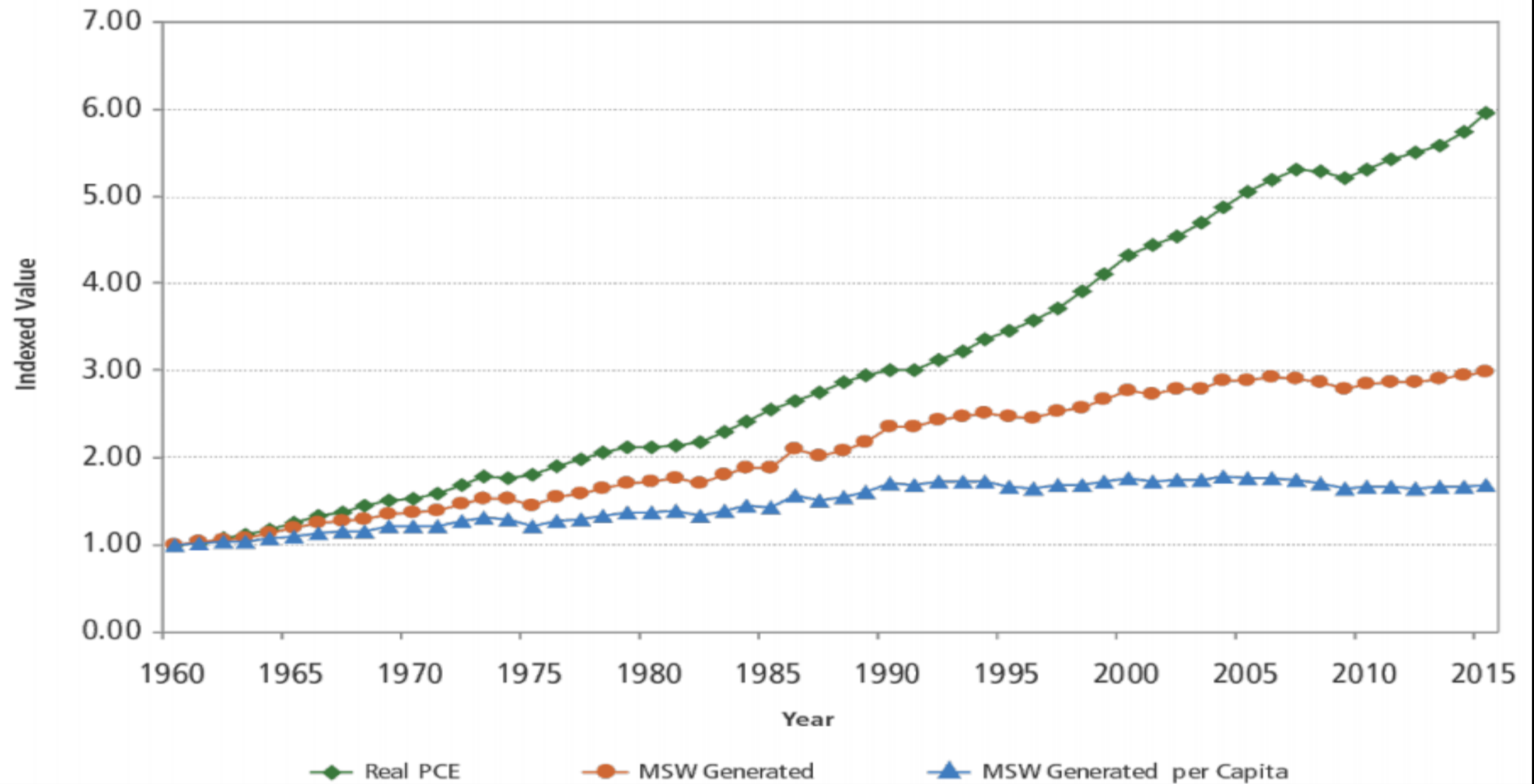


Figure 12. National Landfill Tipping Fees, 1982-2015 (\$2015 per ton)

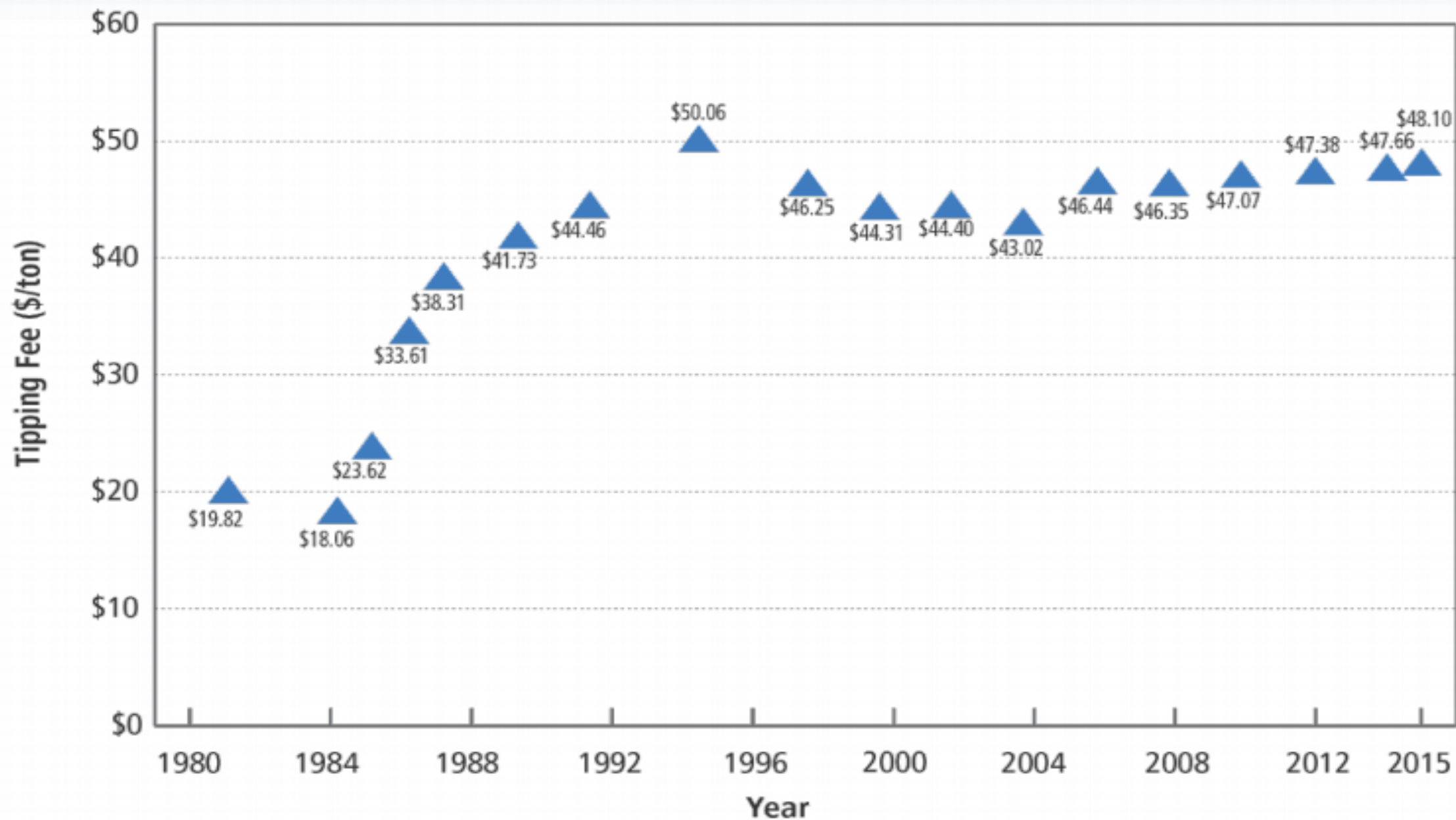
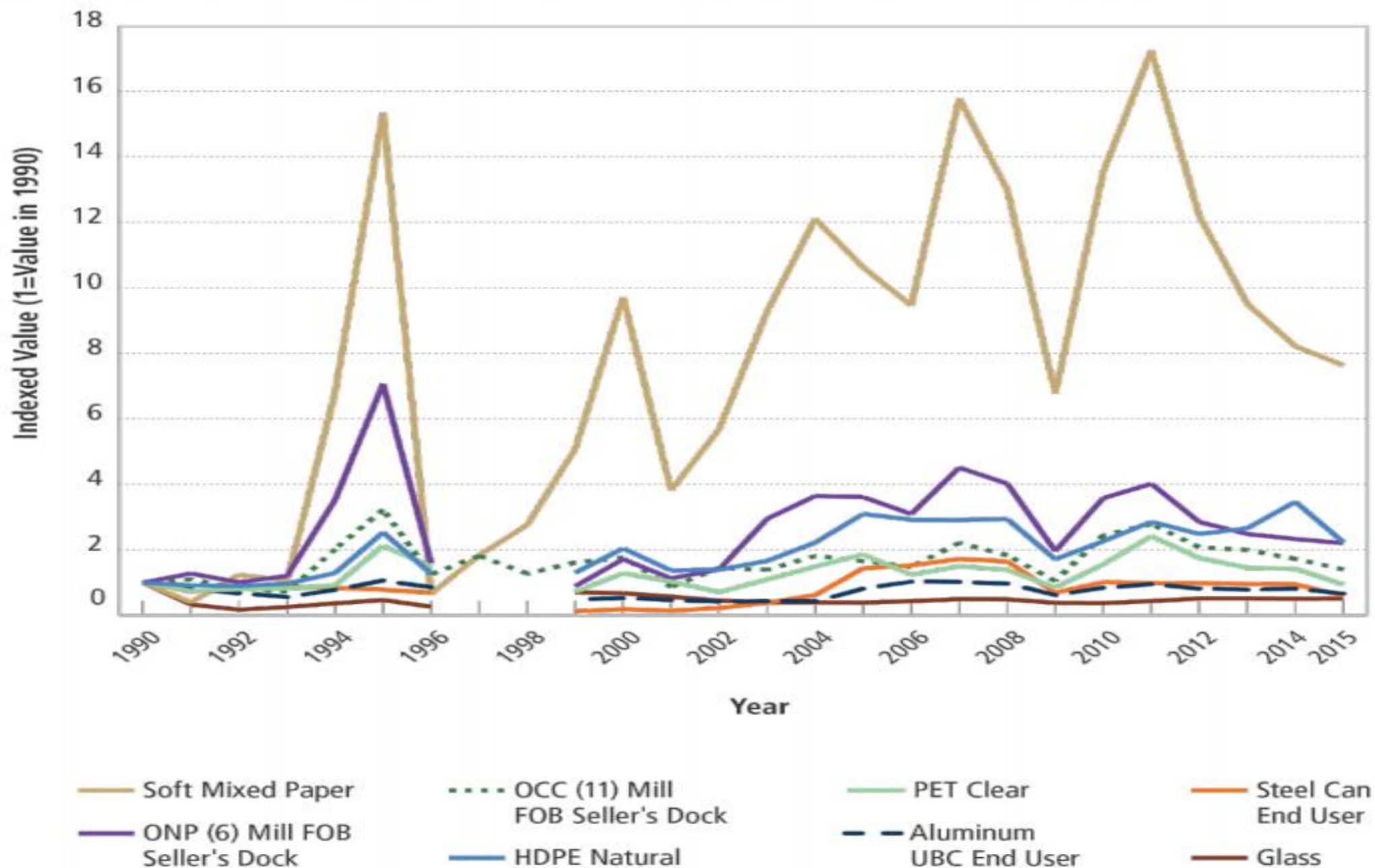


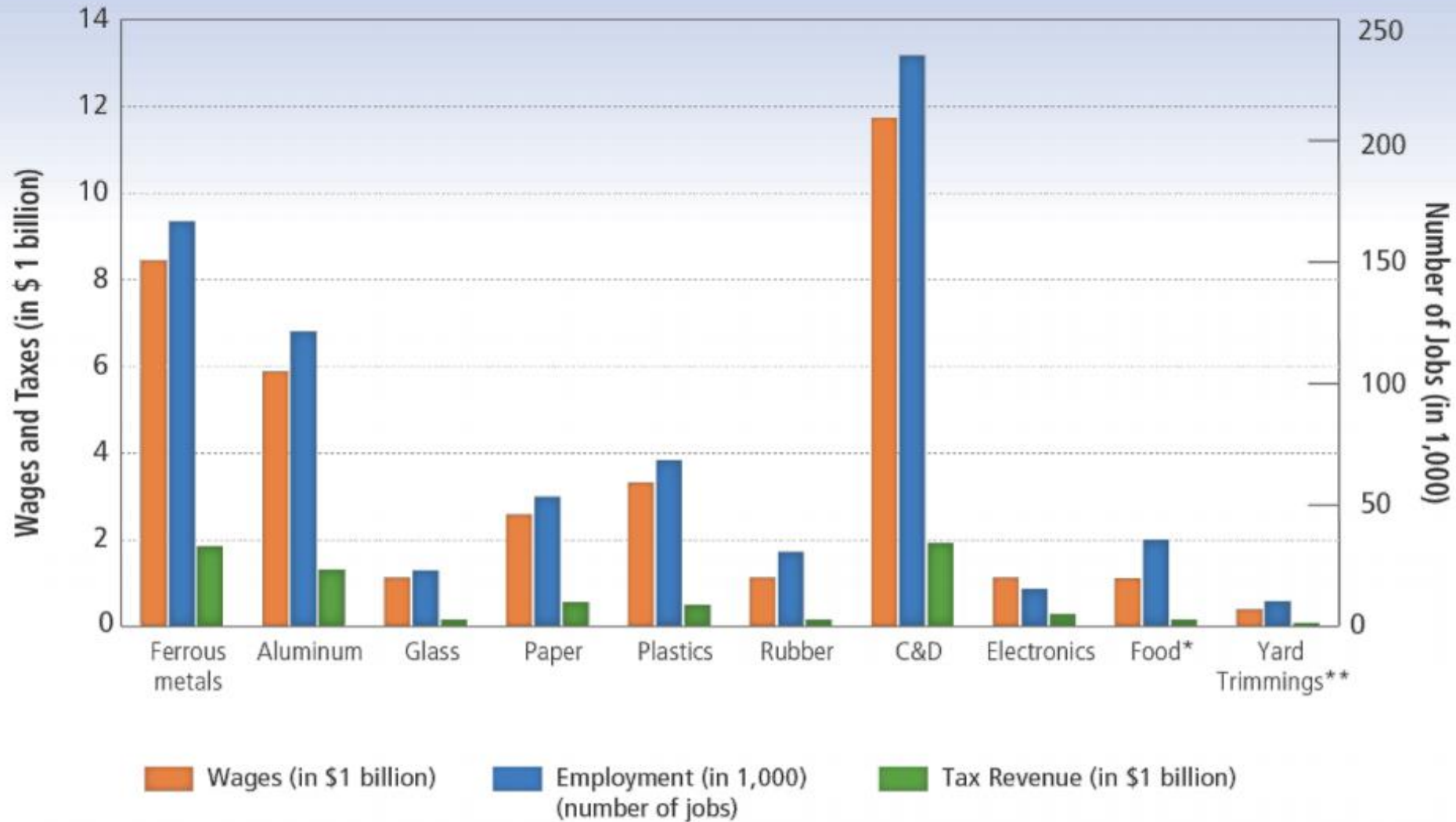
Figure 11. Indexed Recycled Commodity Values by Year



Impacts



Figure 10. Wages, Taxes and Jobs Attributed to Recycling



*Food category includes animal feed, meal, meat, fat, oils and tallow, as well as community food service

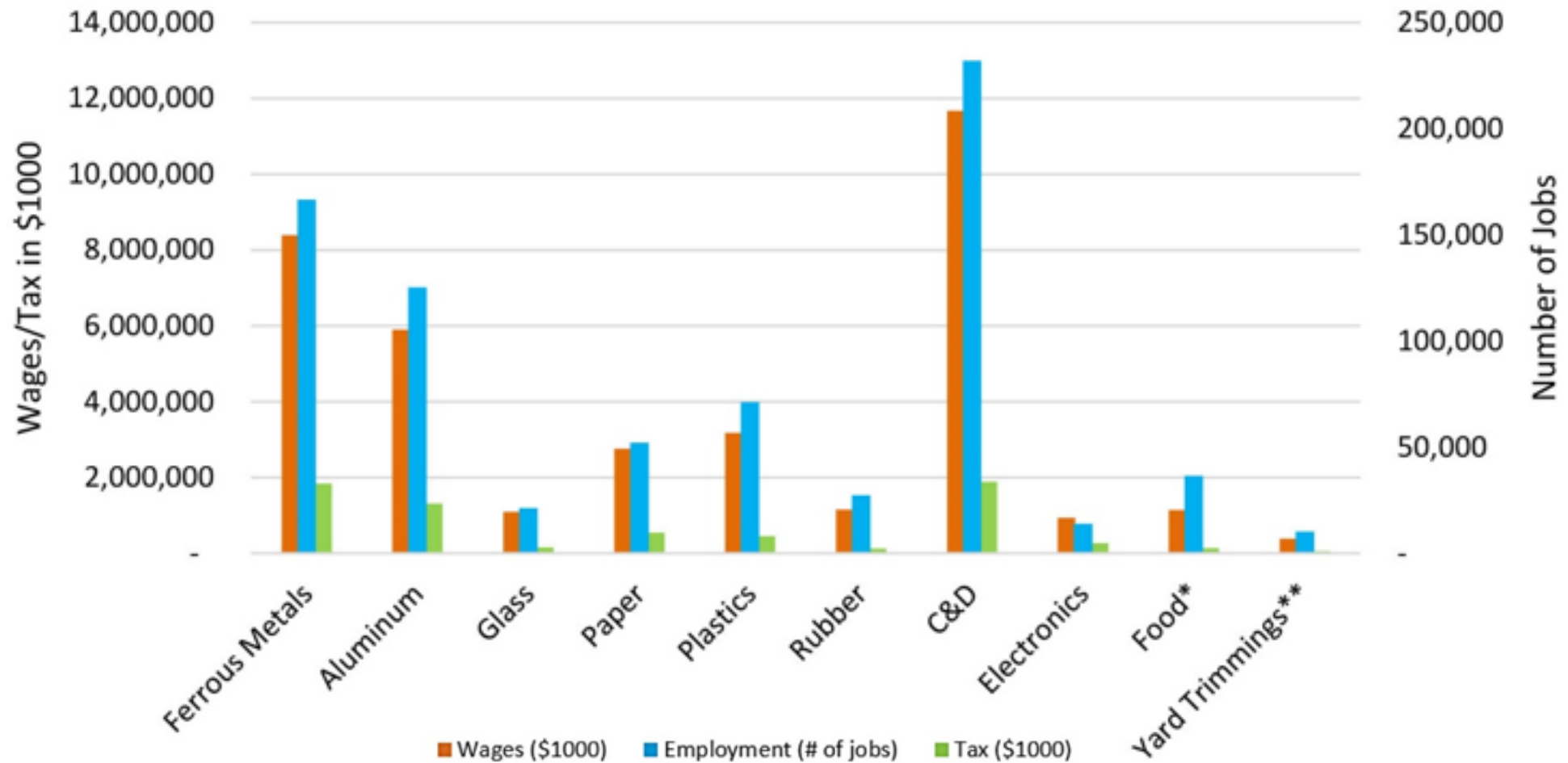
**Yard Trimmings category includes biodiesel, biogas, compost, mulch and wood chips

757,000 jobs

\$36.6 billion in wages

\$6.7 billion in tax revenues

Wages, Tax and Jobs Attributable to Recycling



Recycling and reuse activities in the United States accounted for (2007 data):

- **757,000 jobs** (1.57 jobs for every 1,000 tons of materials recycled);
- **\$36.6 billion** in wages; and
- **\$6.7 billion** in tax revenues.

Recycling Economics

136 million tons landfilled

- 31% recyclable materials with commodity value of \$8.9 billion
- Total tipping fee = \$6.7 billion

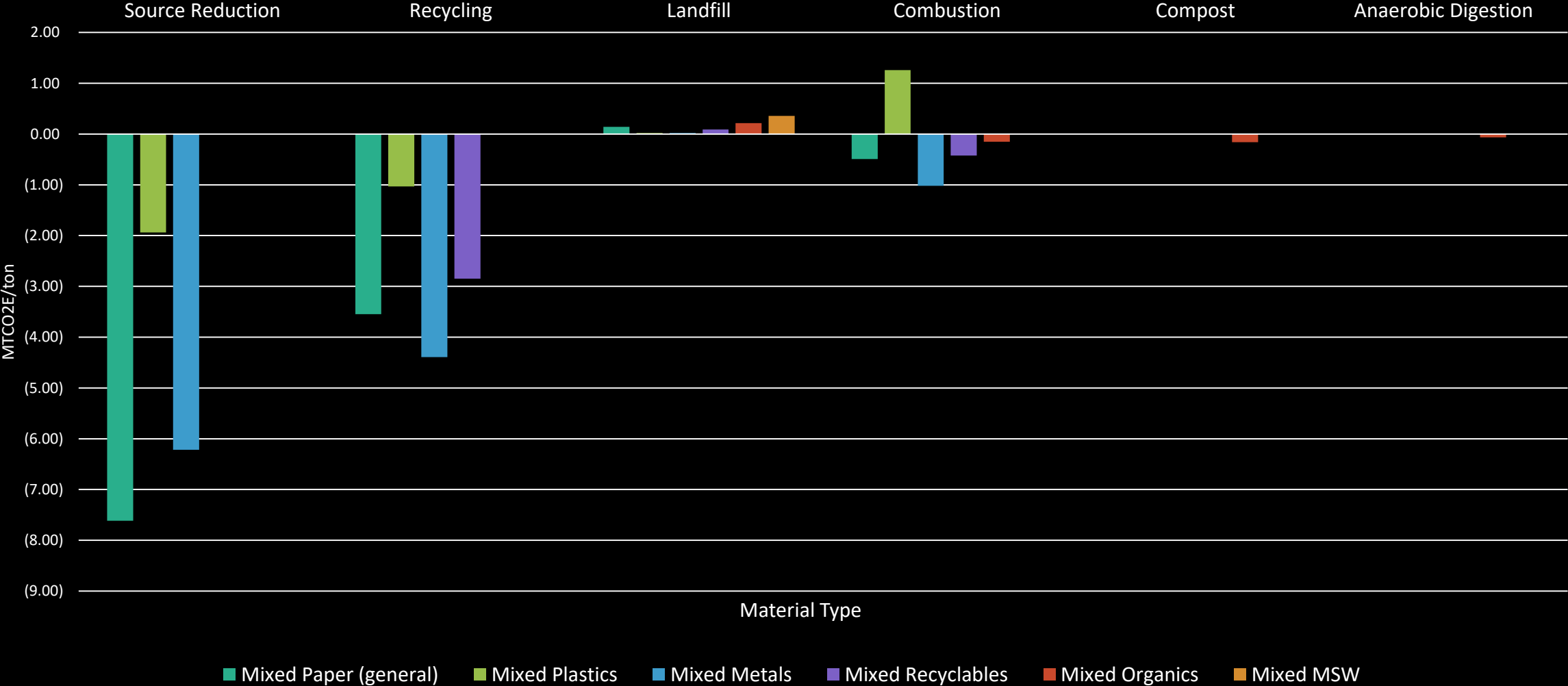
Total economic opportunity

- **\$15.6 billion**



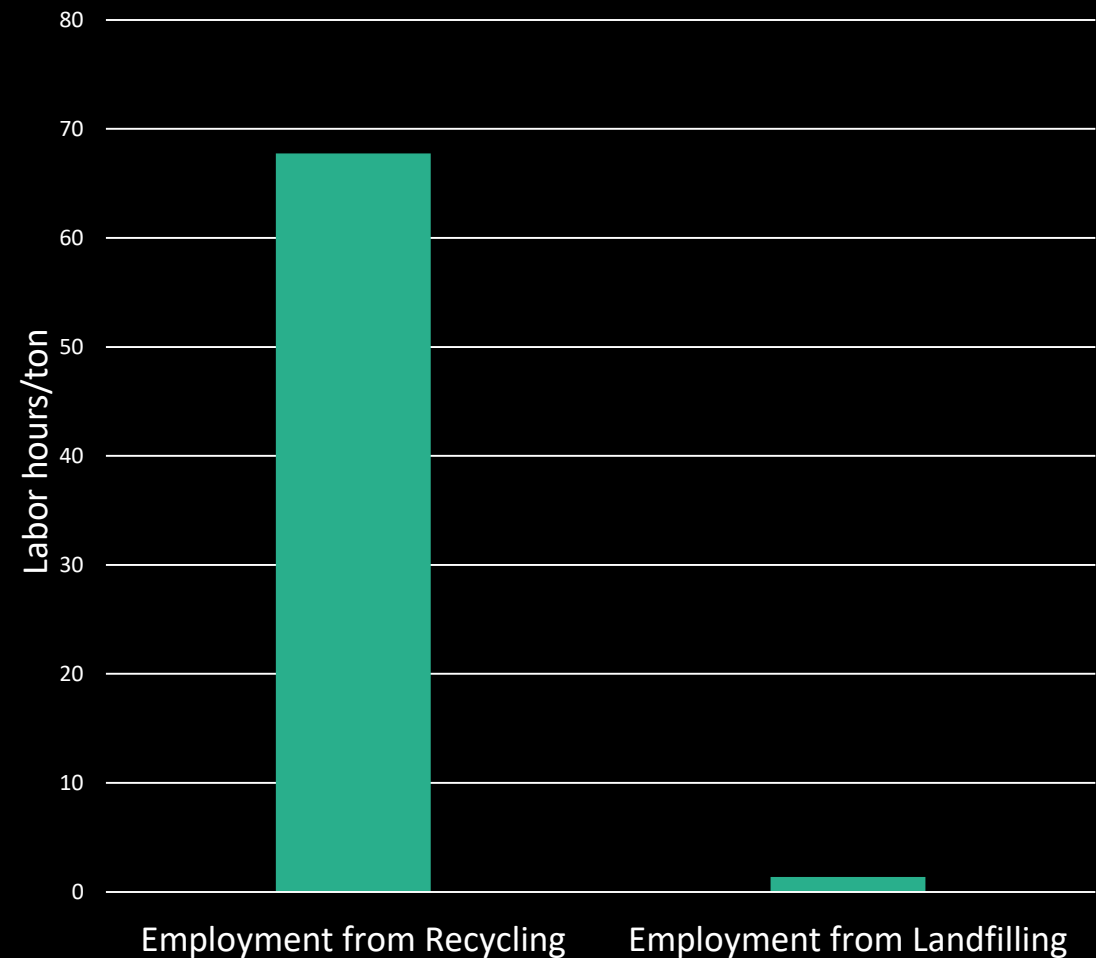
Environmental Impacts by Management Practice

Comparing GHG Emissions by Management Practice

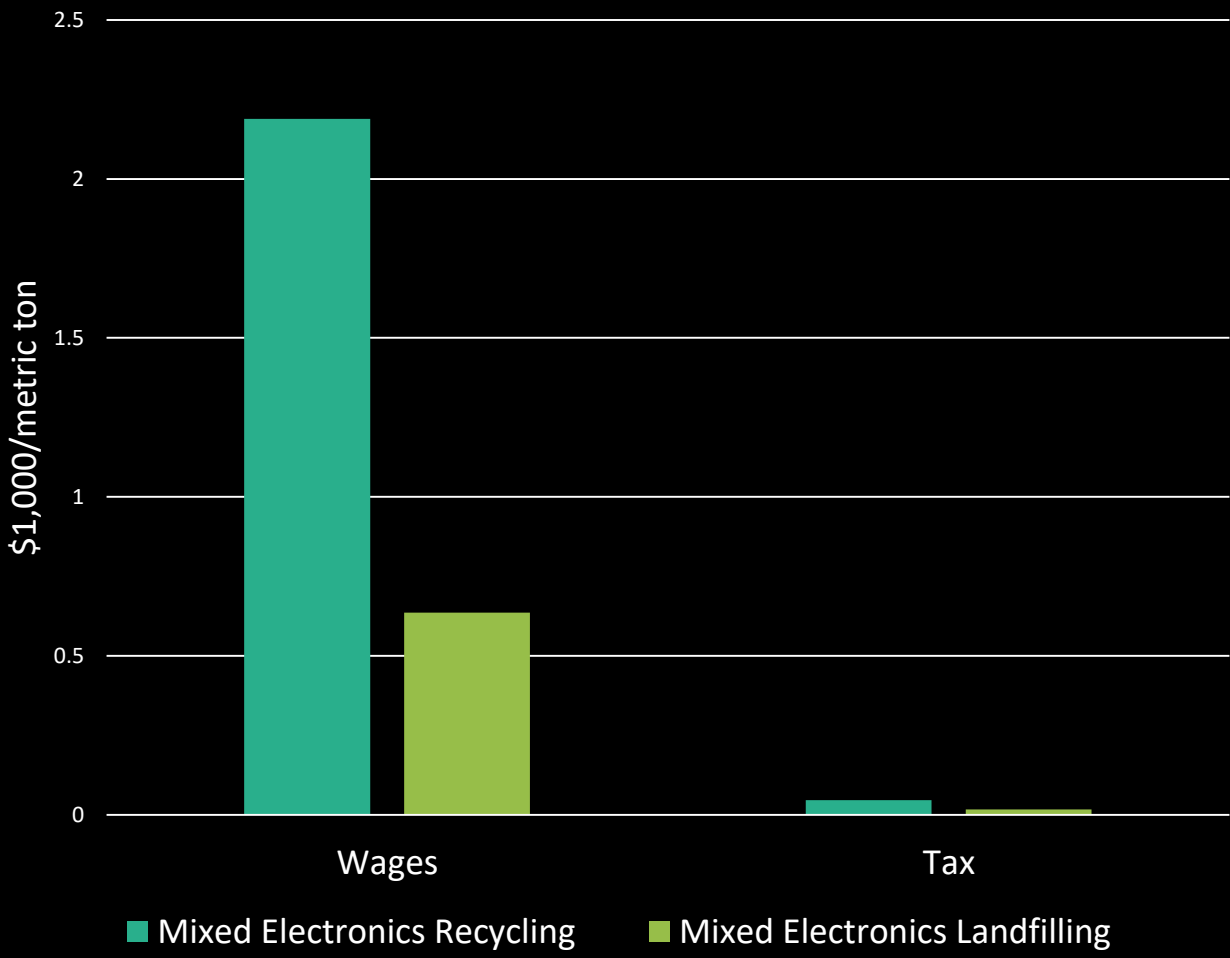


Economy-wide impacts of landfill diversion practices

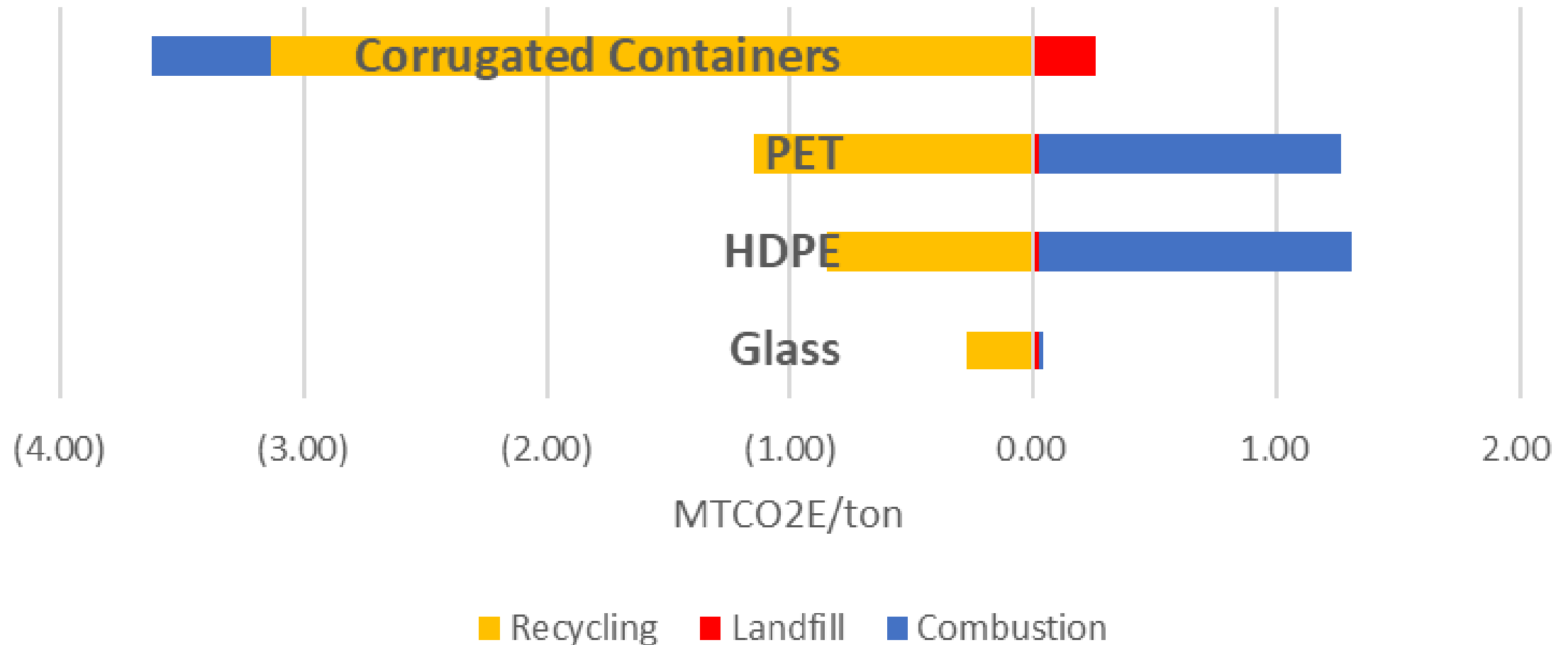
Mixed Electronics



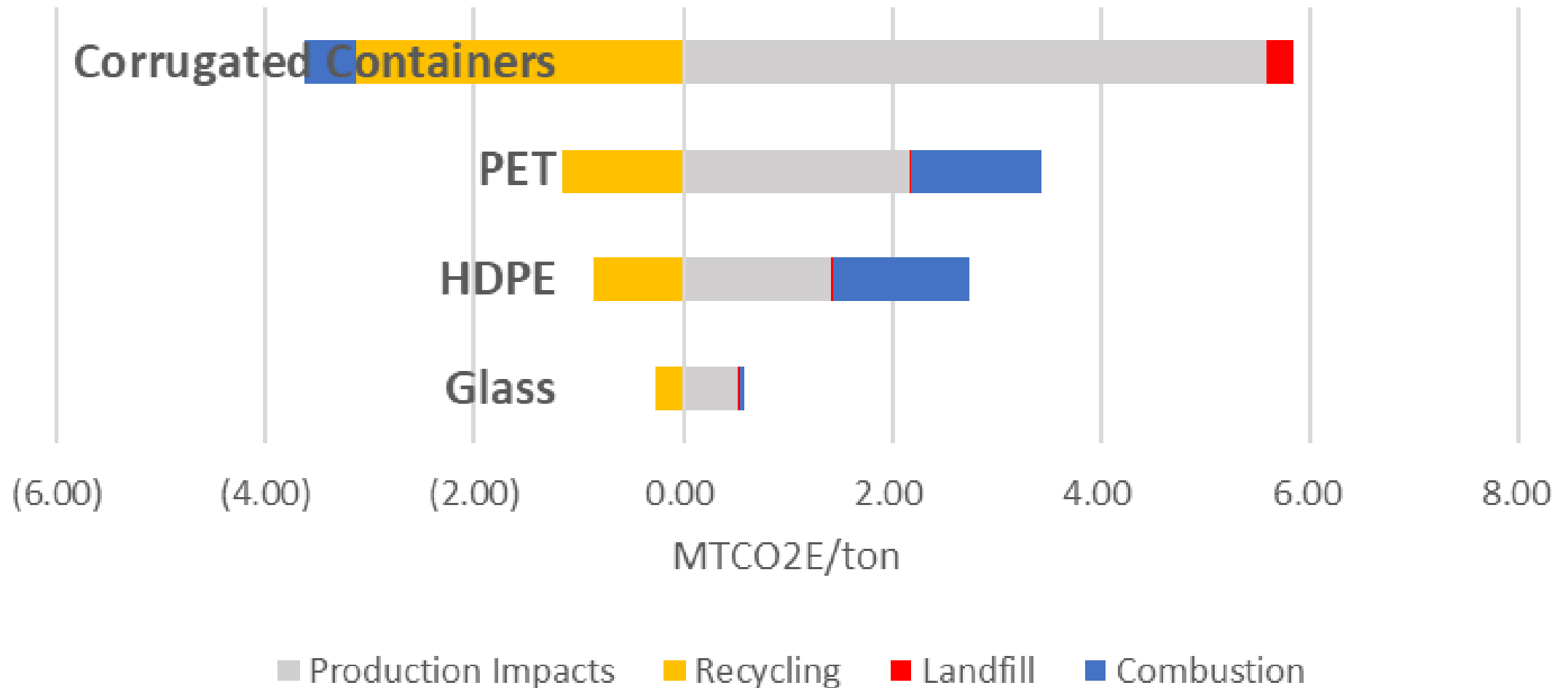
Mixed Electronics



Considering Material Choice without Production Impacts



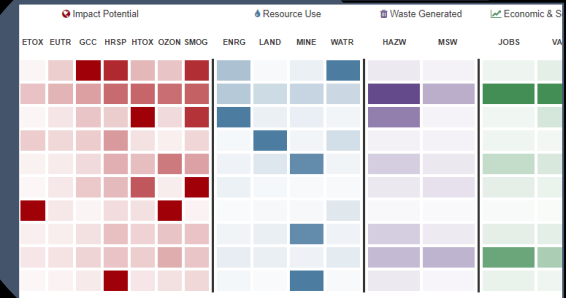
Considering Material Choice with Production Impacts



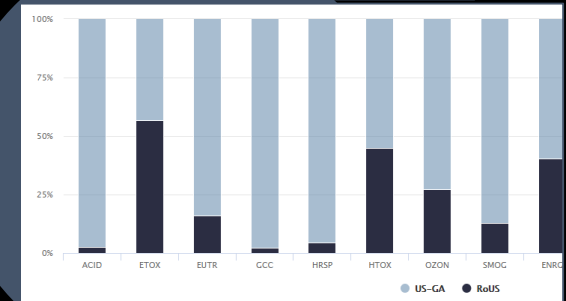
SMM Prioritization Tools

- The SMM Prioritization Tools will help users:
 - Establish big picture priorities for environmental improvement
 - Focus resources and action for greater holistic benefit
 - Identify key stakeholders for collaboration
- Three tools:
 - National Tool
 - State Tool
 - Organizational Tool

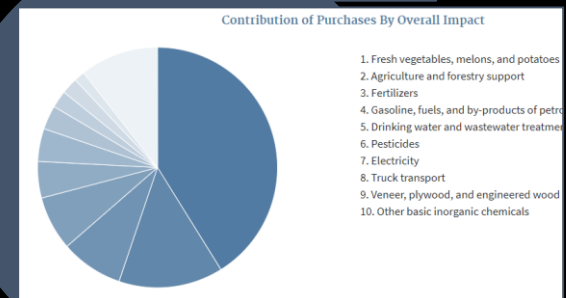
National Tool



State Tool



Org. Tool



Critical Issues



Recycling in the News

Is This the End of Recycling?

Americans are consuming more and more stuff. Now that other countries won't take our papers and plastics, they're ending up in the trash.

ALANA SEMUELS MAR 5, 2019



Plastic, paper, glass, and cardboard at a Recology facility.

OLIVER MILMAN

SCIENCE 02.27.2019 00:00 AM

Since China's Ban, Recycling in the US Has Gone Up in Flames

All that neatly sorted plastic, paper, and glass used to go to China. Now a lot of it is just getting burned instead.

SIERRA

The national magazine of the Sierra Club

CLIMATE AND ENERGY

LANDS AND WATERS

ADVENTURE

GREEN LIFESTYLE

MAGAZINE

DONATE

SEARCH

GO



The US Recycling System Is Garbage

China doesn't want our crap anymore, and who can blame them?

CHINA HAS SHUT DOWN ITS INEFFICIENT, POLLUTING "RECYCLING VILLAGES" IN FAVOR OF MODERN FACILITIES. | PHOTO-ILLUSTRATION BY D-KEINE/GETTY IMAGES



America Recycles – Measurement Workgroup Efforts

- Definition
- Recycling System Map
- Meters/Metrics
- Goals



Thank you!

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