

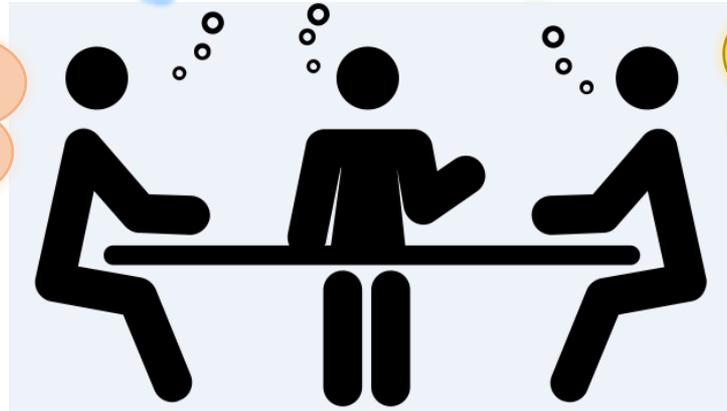
# Waste & Recycling Policy Considerations...

How do service levels impact the cost to residents?

What are the financial and environmental impacts?

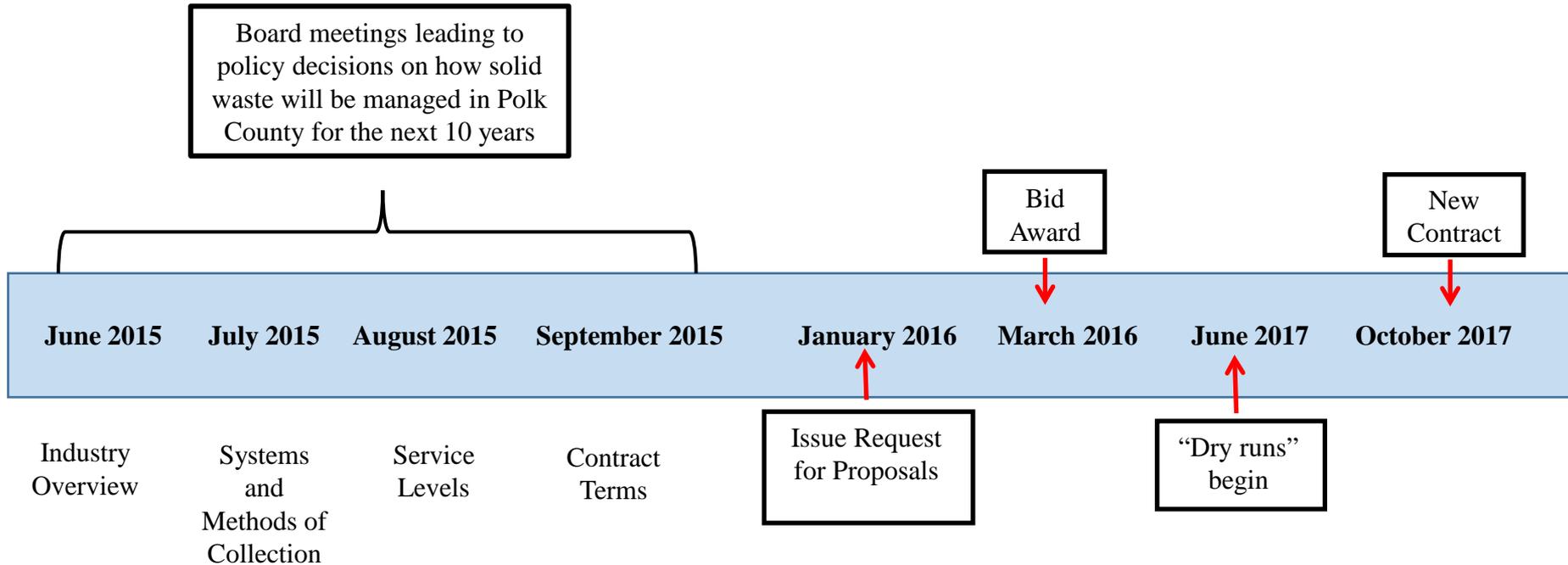
What are the waste processing options?

Are County assets being optimized?



How do all of these considerations impact the collection process?

# Projected Timeline 2017 Residential Collection Services



# Current Non – Ad Valorem Fee Assessment Allocation



Collection

\$109.80  
(71%)

Disposal/Processing

\$44  
(29%)

Cost to resident

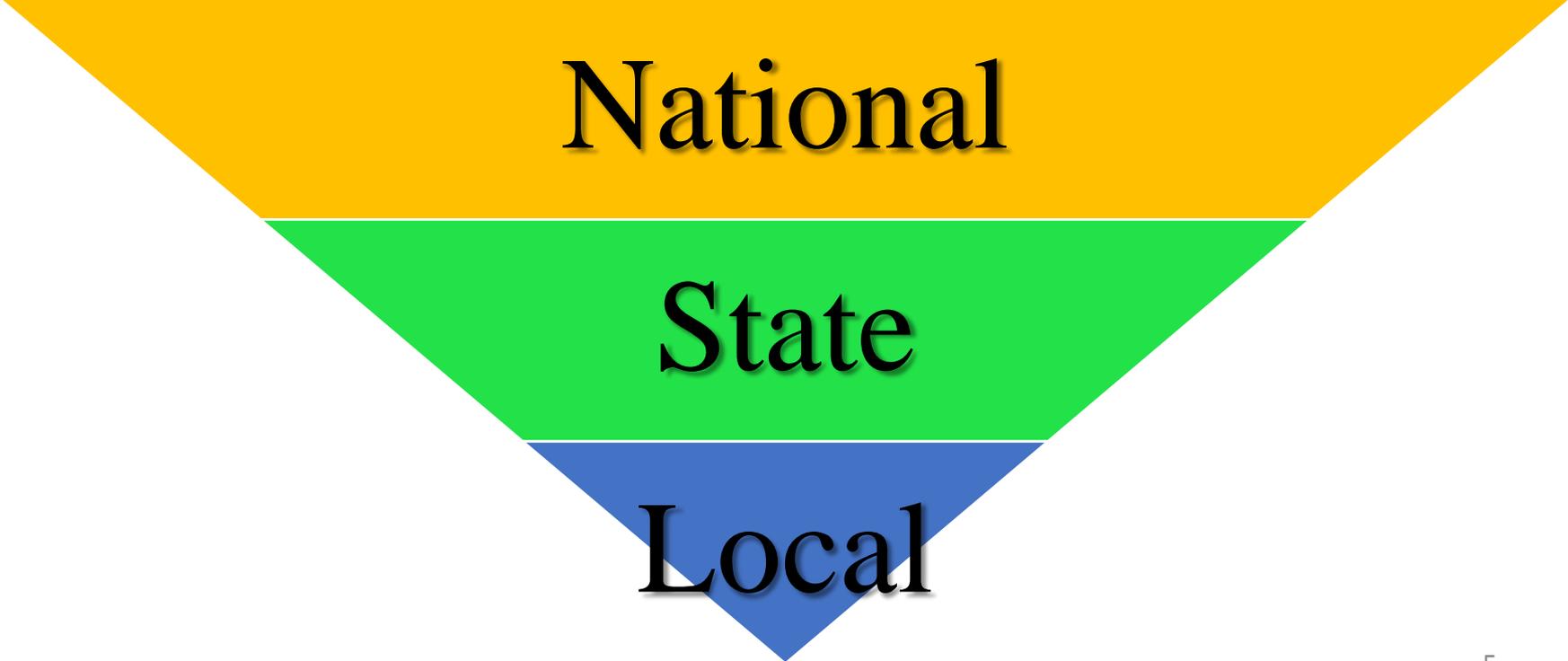
\$153.80

# Why Disposal & Processing Matters

The way the County chooses to process waste will determine waste collection.

- How should waste be collected?
- How will collection cost be structured?
- How does disposal and processing of waste impact participation guidelines to residents?

# Solid Waste Management Overview

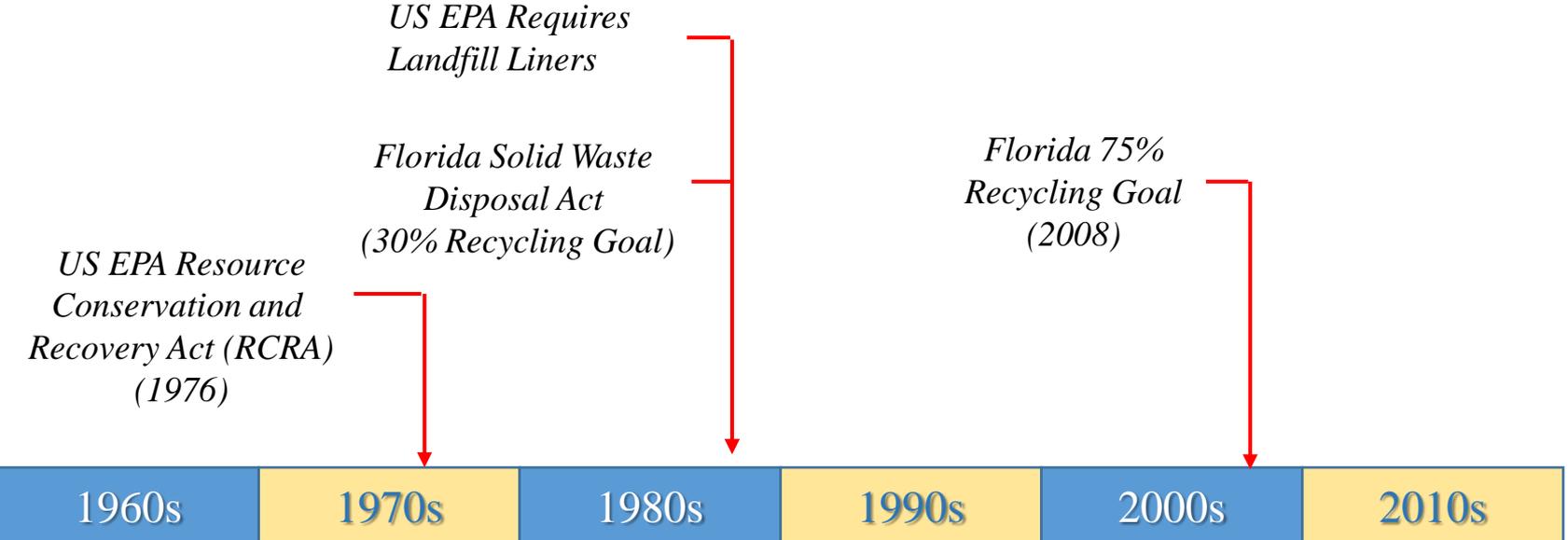


National

State

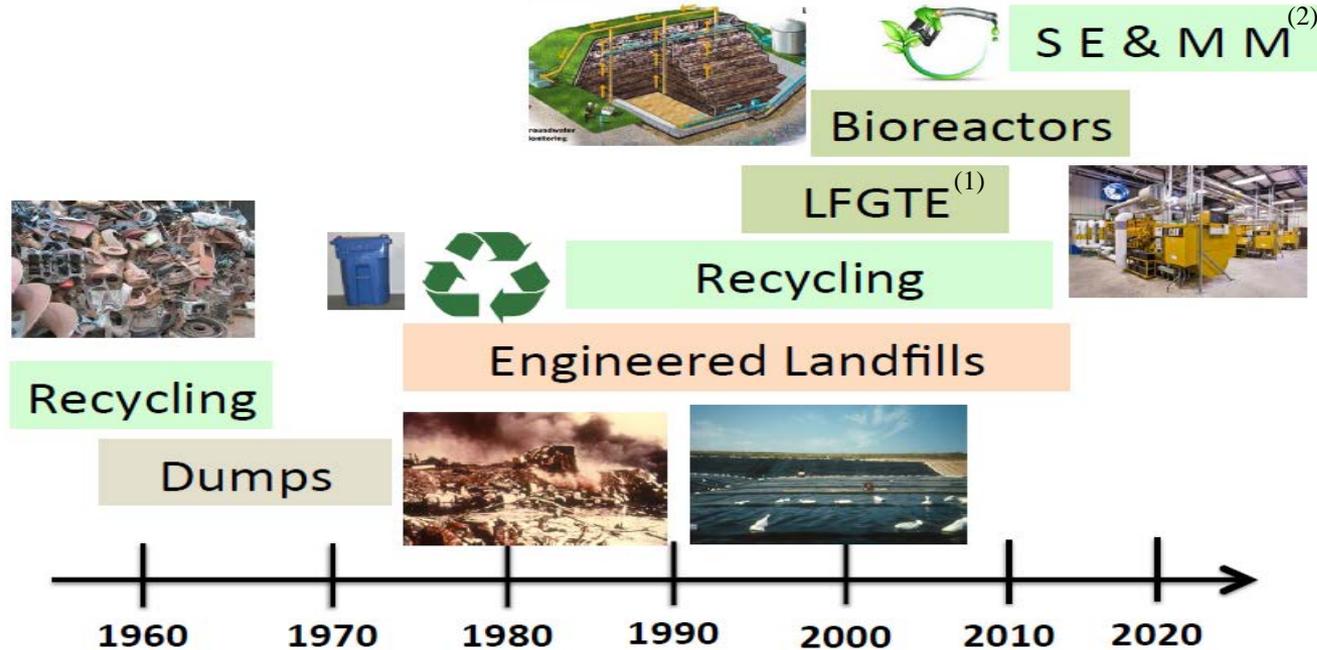
Local

# Solid Waste Management Regulatory Timeline - Past 50 Years



*US Waste Management*

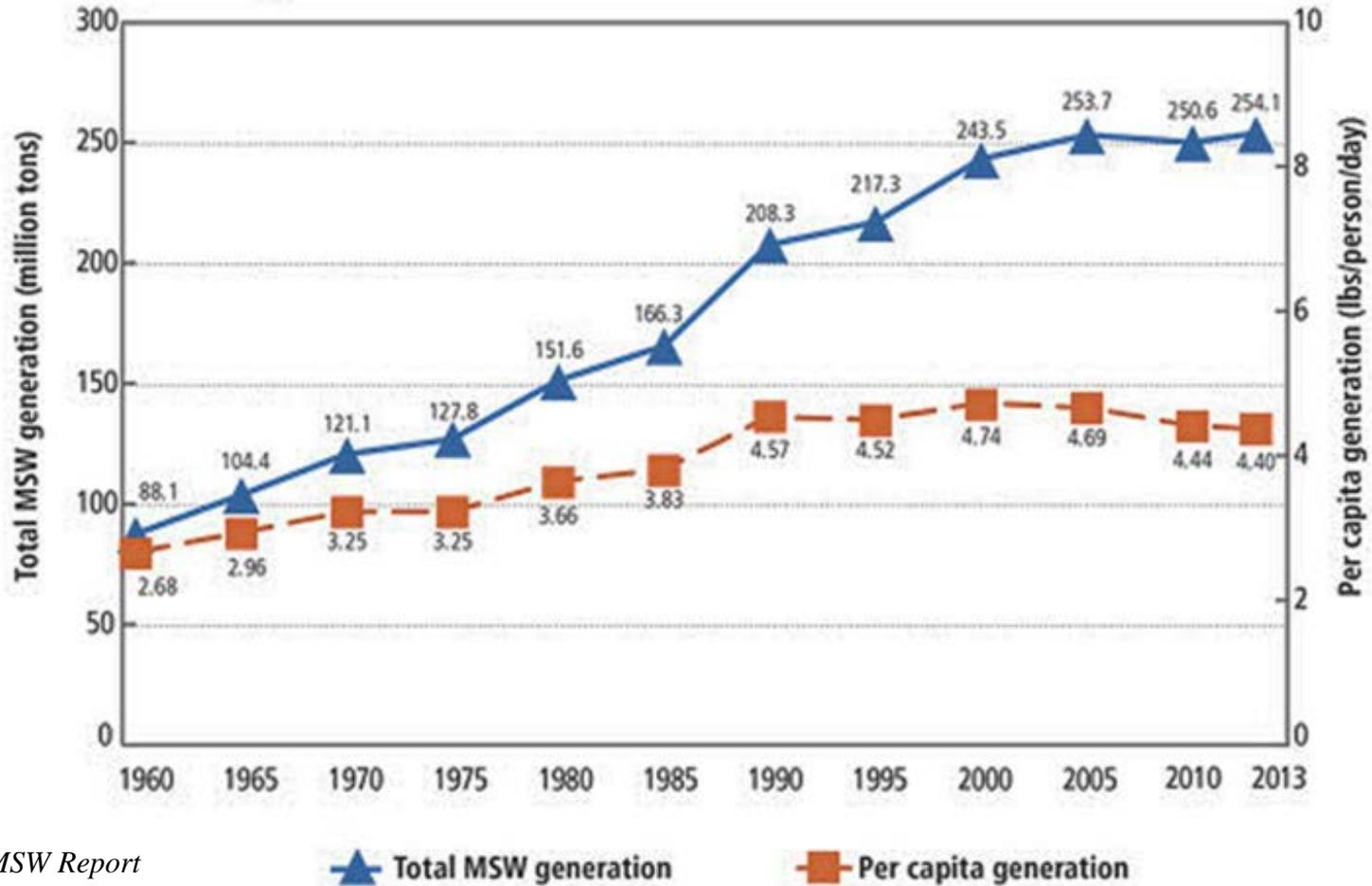
# Solid Waste Management Timeline - Past 50 Years



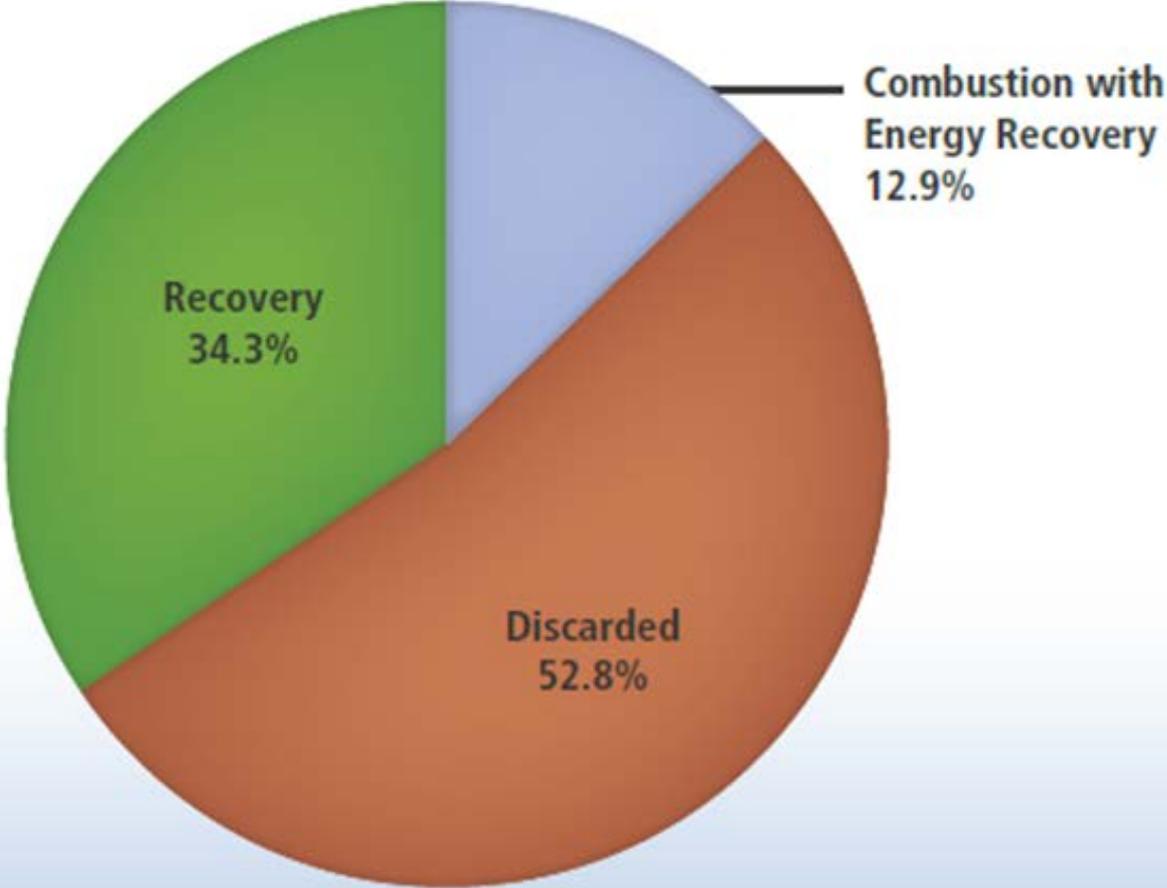
1) LFGTE – Landfill Gas to Energy

2) SE & MM – Sustainable Energy & Materials Management

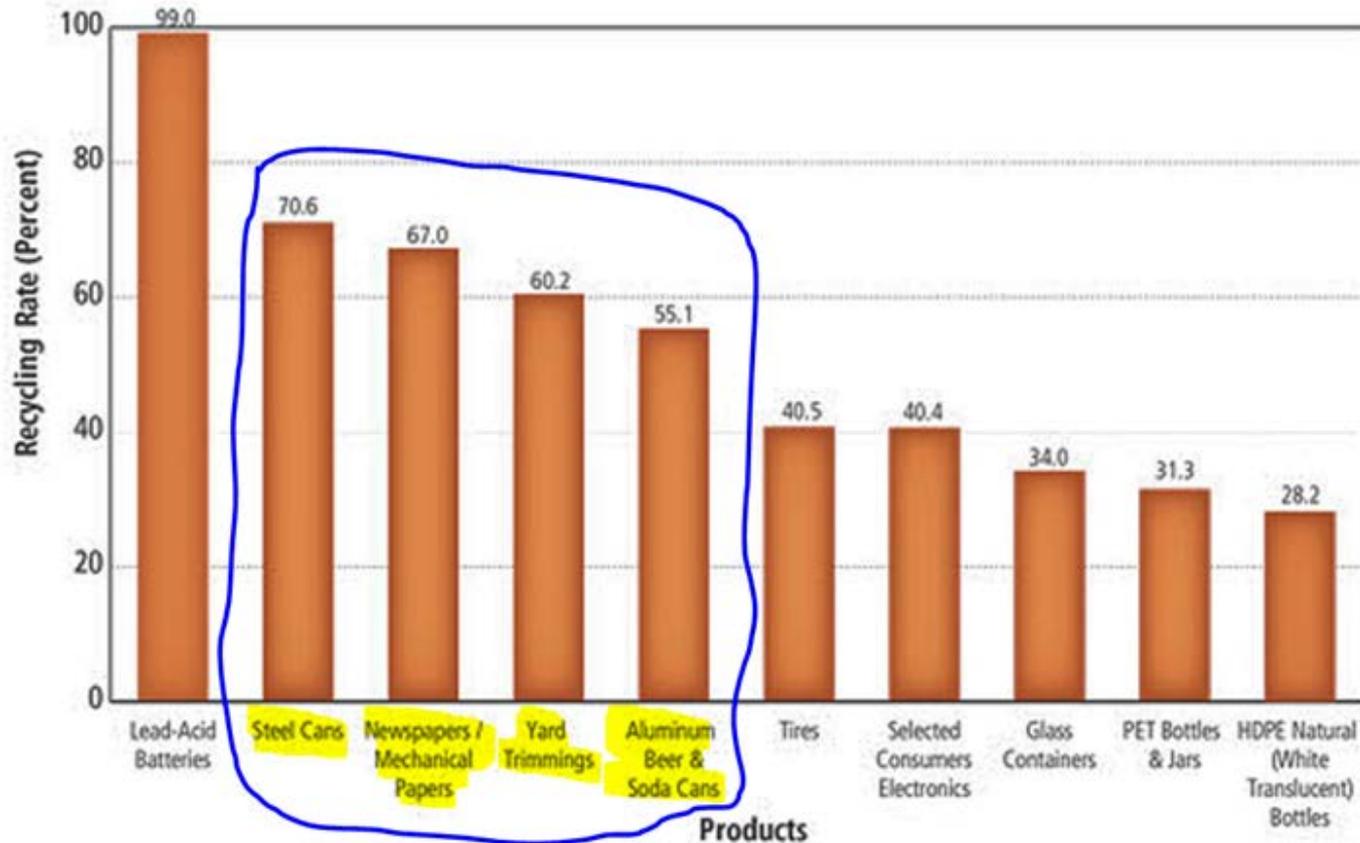
# Municipal Solid Waste (MSW) Generation Rates in the US



# Management of MSW in the United States 2013

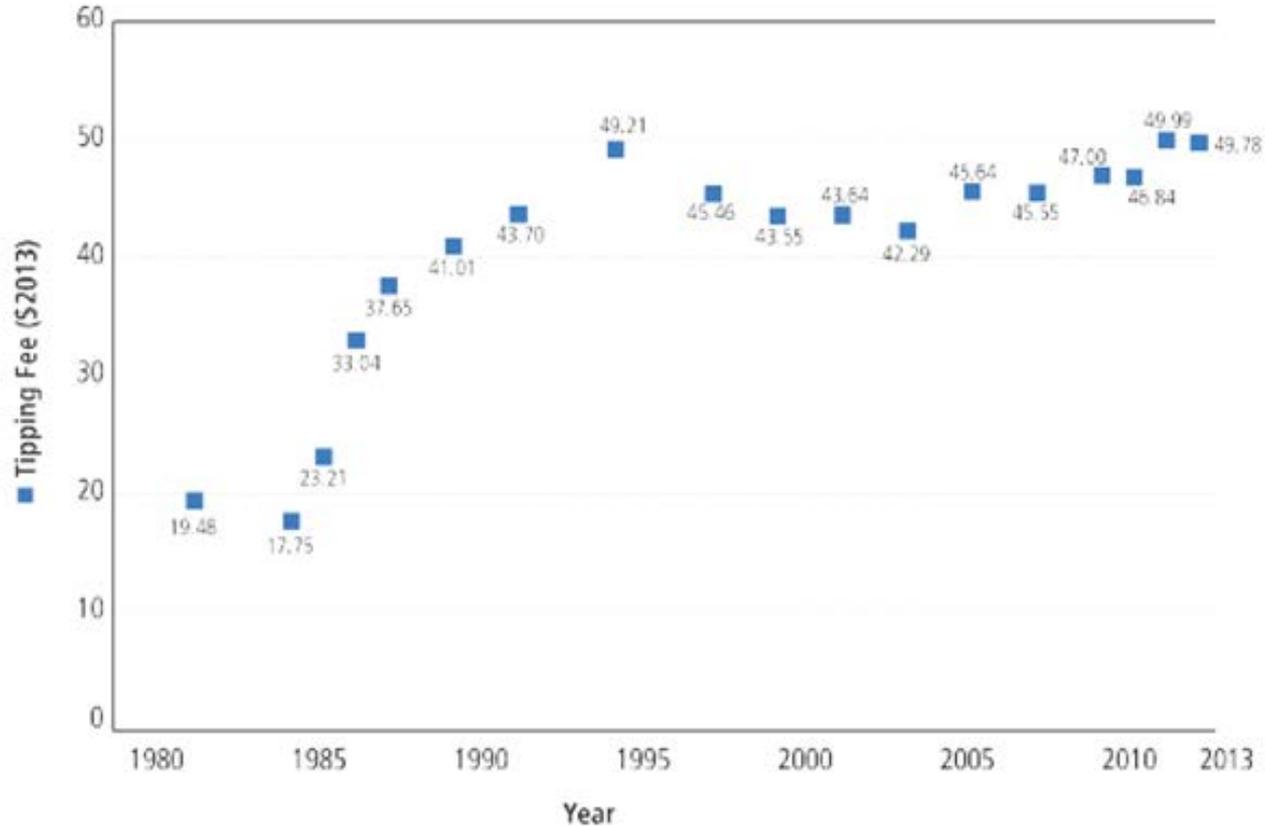


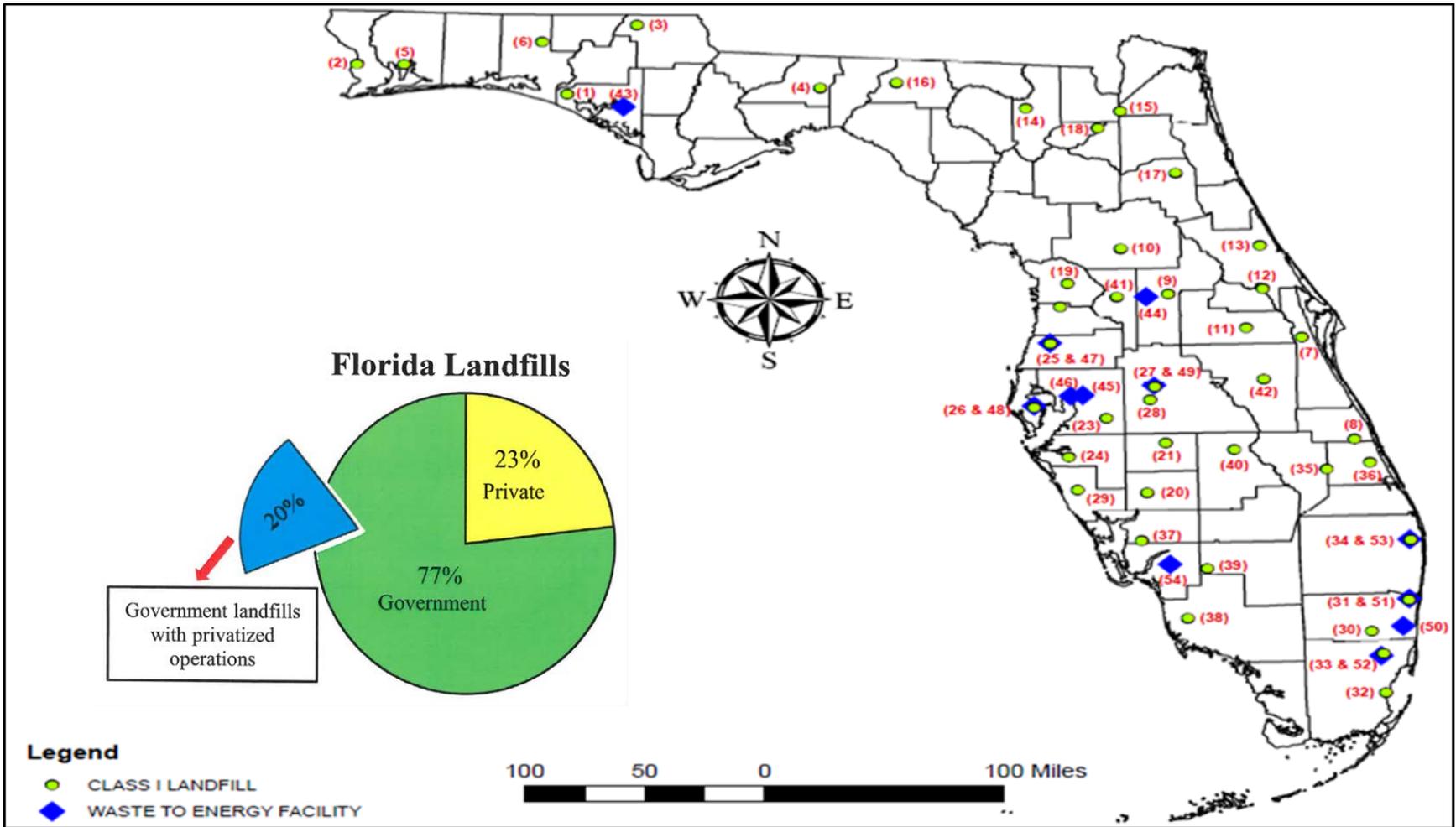
# Recycling Rates of Selected Products in the US 2013\*\*



\*\*Does not include combustion with energy recovery.

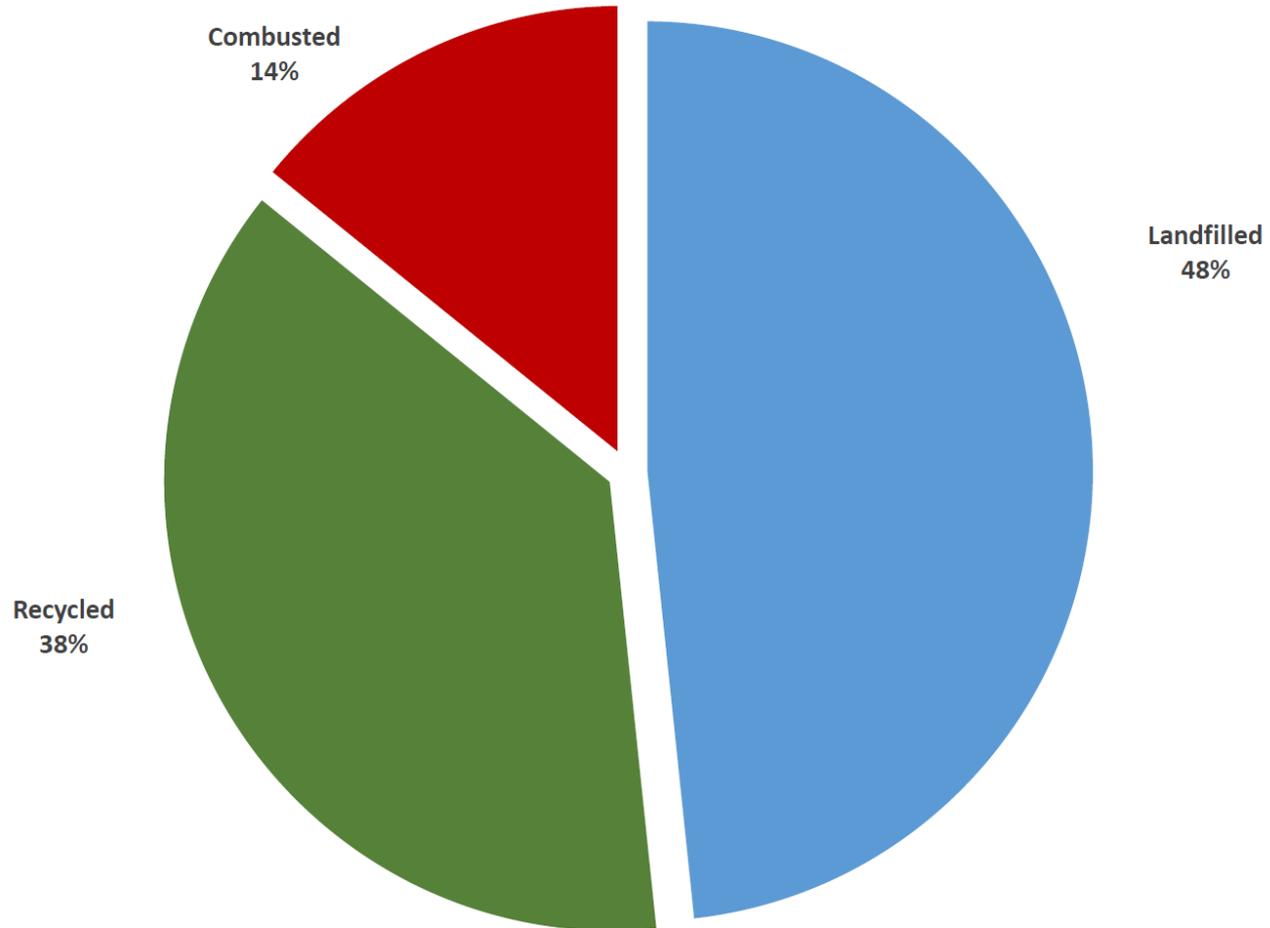
# National Landfill Tipping Fees







# Management of MSW in Florida 2013 – 30.7 Million Tons

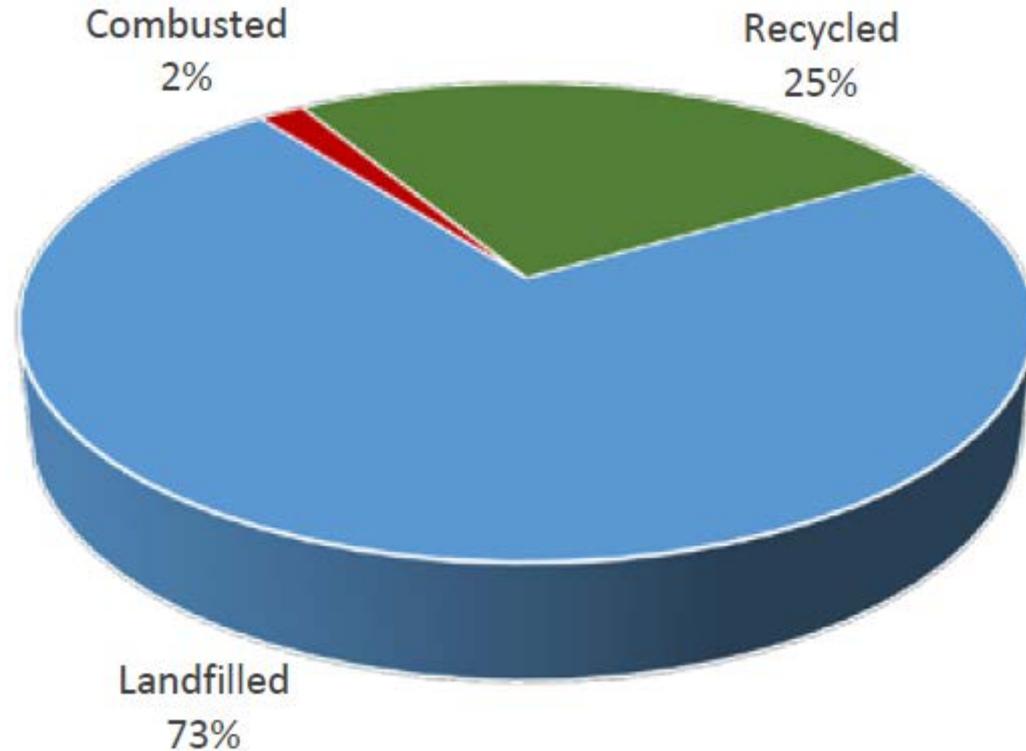


# Management of MSW in Polk County 2013

**Population<sup>1</sup>**                      613,950

**MSW Management (tons)<sup>2</sup>**

A. Landfilled	688,682
B. Combusted	16,537
C. Recycled	239,831
D. Stockpiled	0
E. Total	945,050



# How do Polk County Rates Compare?

Tipping fees from other Florida counties:

Entity	Fees Per Ton
Florida statewide average	\$43.65 (Ranges from \$25.50 - \$83.92)
Orange County, FL	\$37.10 - residential \$39.80 - commercial
Manatee County, FL	\$36.00 for most waste \$61.00 for construction debris
Palm Beach County, FL	\$42.00 - residential \$45.00 - construction debris \$25.00 - yard waste \$50.00 - car tires \$190.00 - truck tires

Polk County tipping fees:

Type	Fee
Garbage/Trash	\$36.50/ton
Yard Waste	\$22.00/ton
Construction and Demolition Debris	\$36.50/ton



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*Separate Collection*



*Landfill*



*Composting*



*Digestion*



*One Bin for All Collection*



# Trends

**Zero Waste**

**Waste  
Diversion**

**China's  
Green  
Fence**

**Product  
Bans**

**Circular  
Economy**



**By the numbers  
or NOT...**

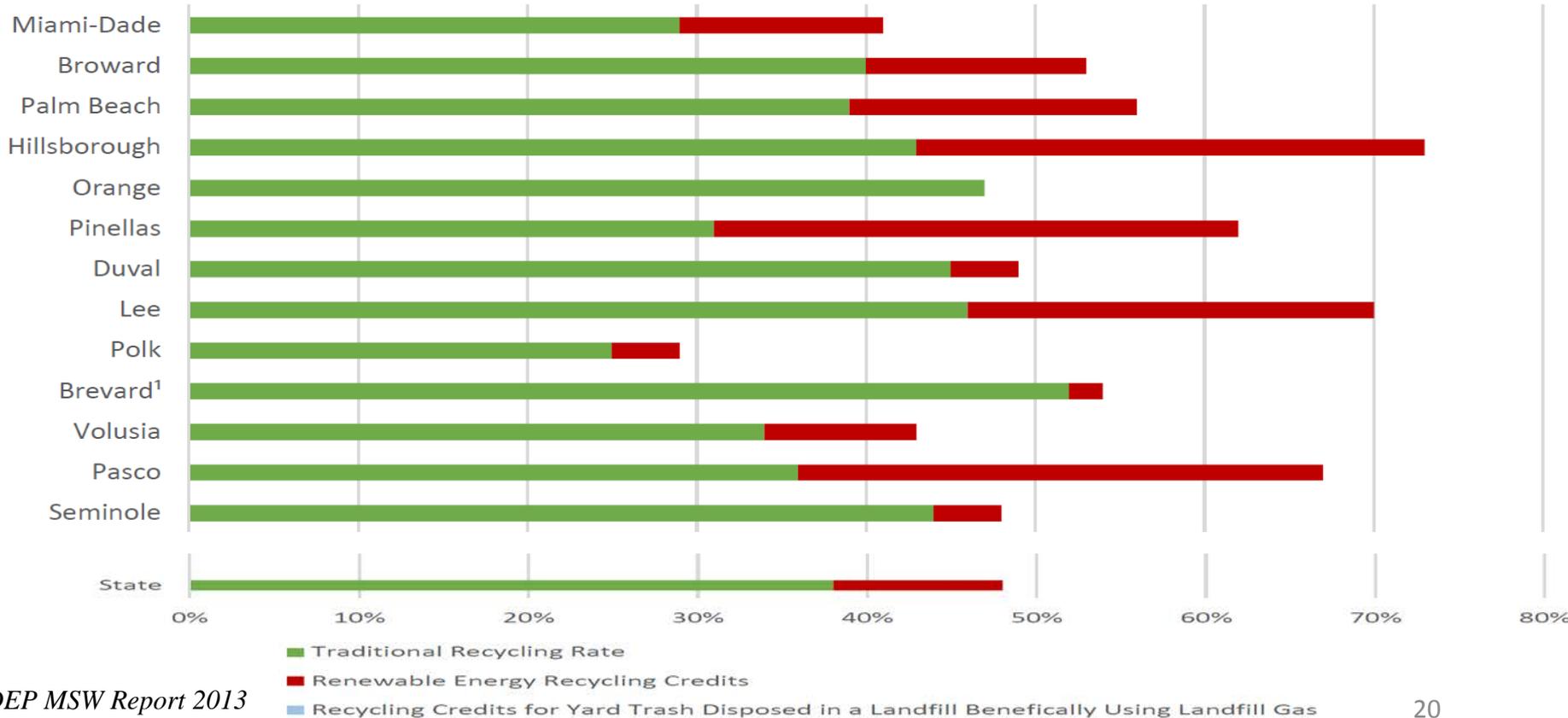
**County Recycling Credits  
Large Counties  
(2012)**

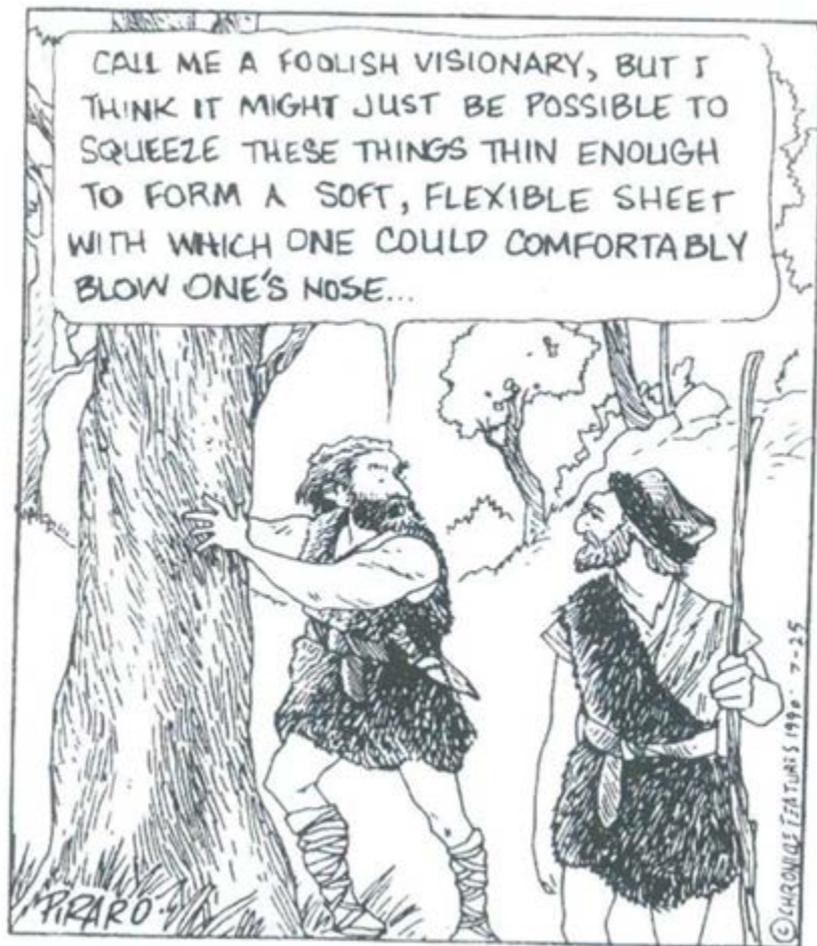


# County Recycling Credits

## Large Counties

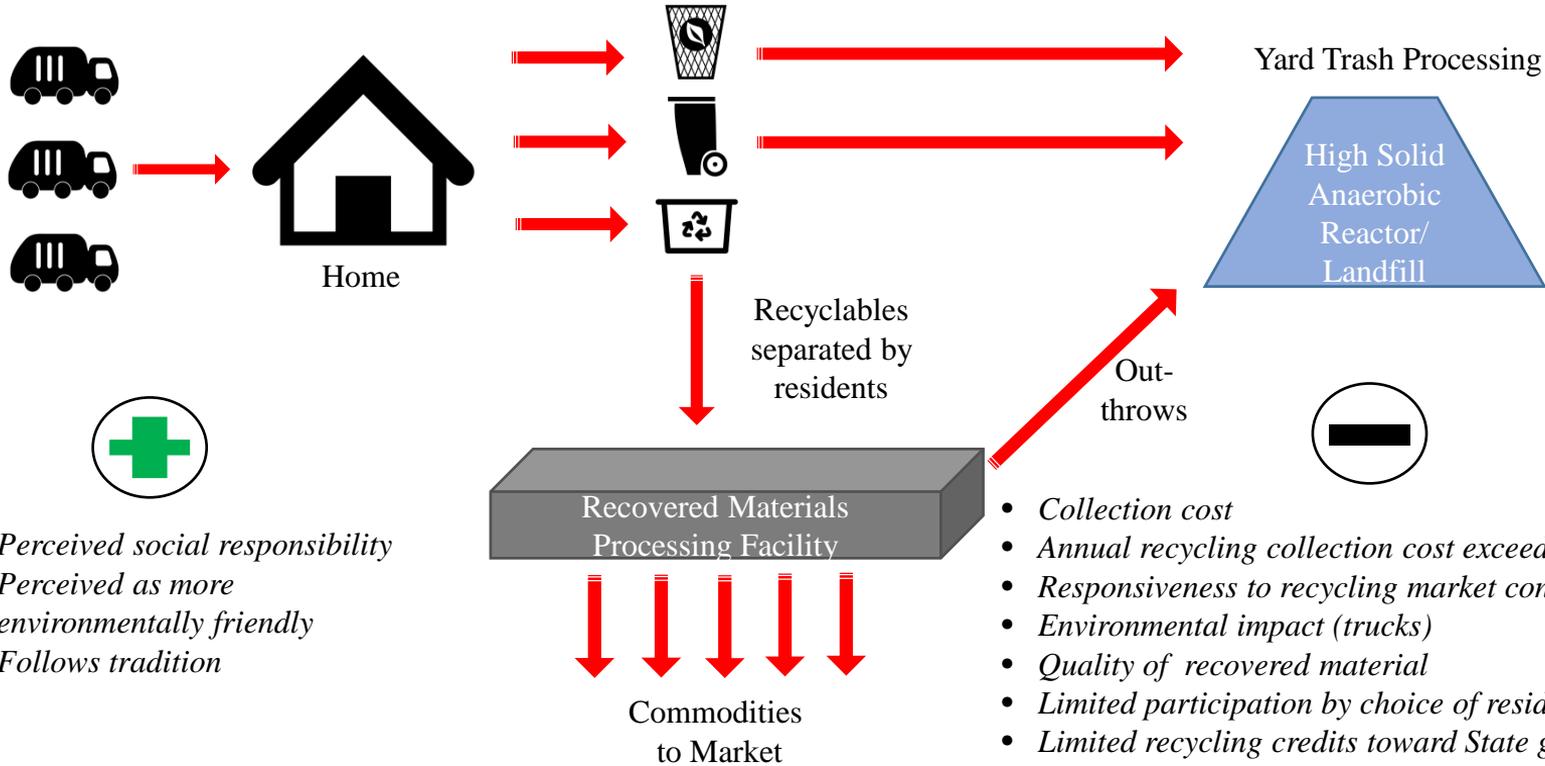
### (2013)





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# Current Business Model

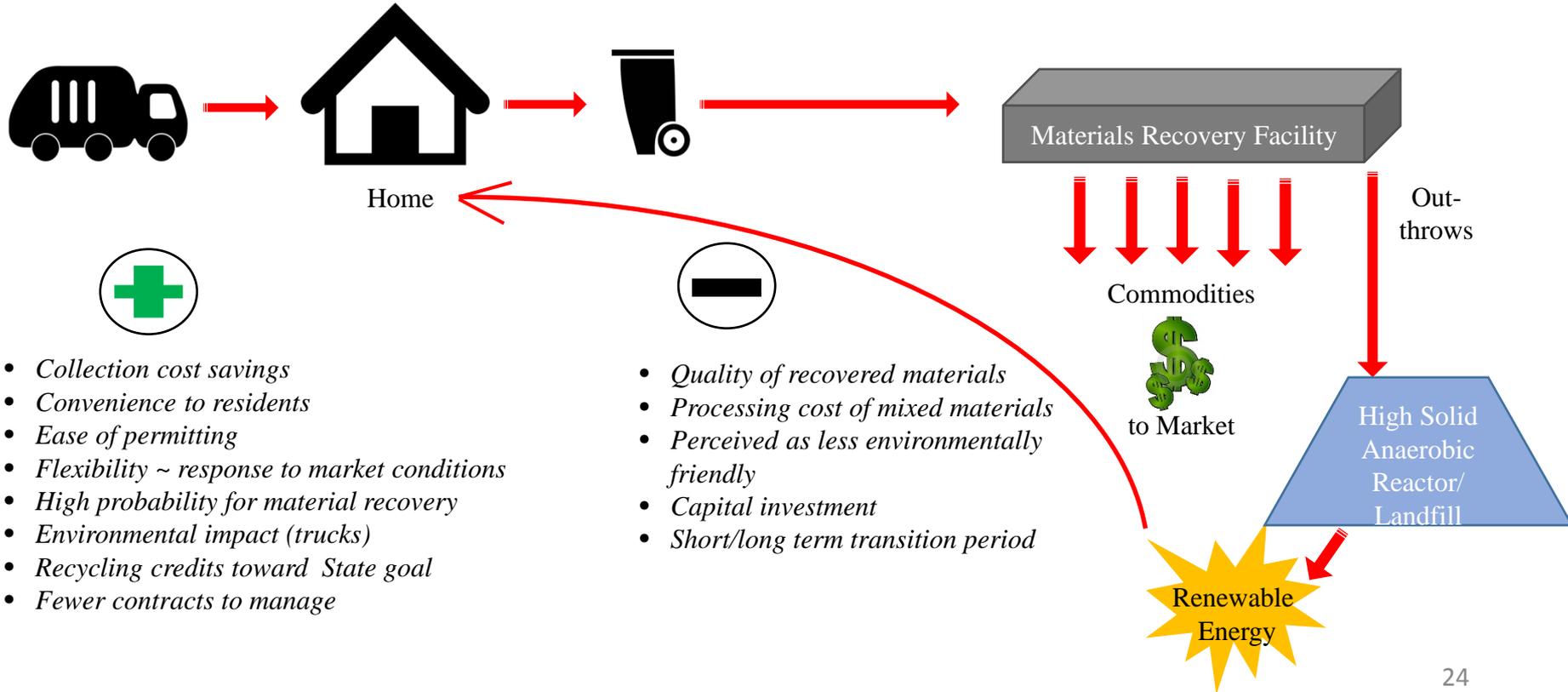


- *Perceived social responsibility*
- *Perceived as more environmentally friendly*
- *Follows tradition*

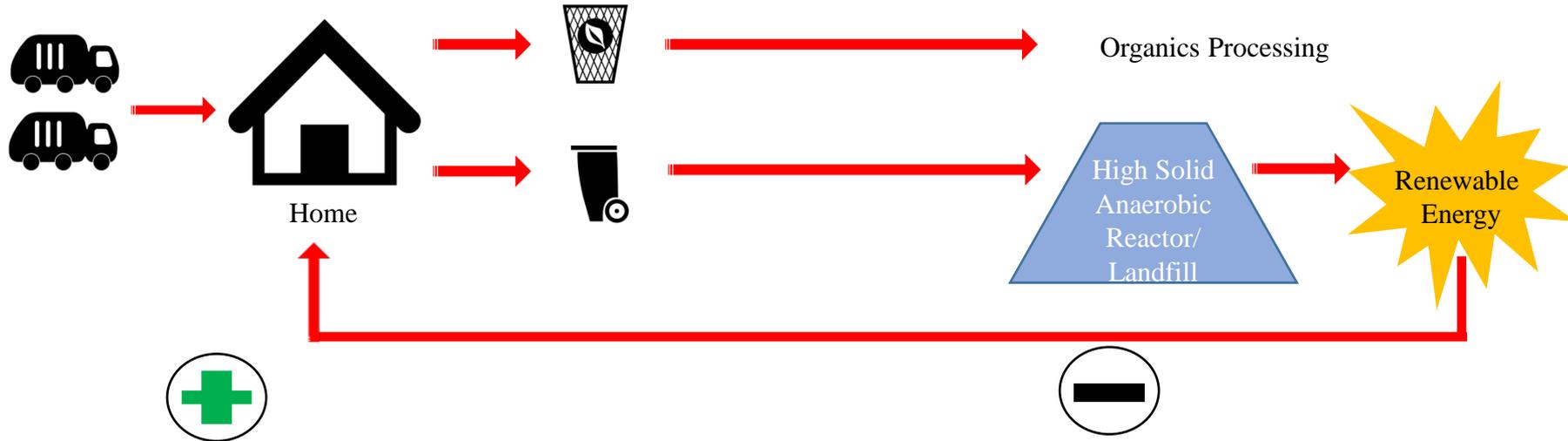
- *Collection cost*
- *Annual recycling collection cost exceeds revenue (\$1.7 MM)*
- *Responsiveness to recycling market conditions*
- *Environmental impact (trucks)*
- *Quality of recovered material*
- *Limited participation by choice of resident*
- *Limited recycling credits toward State goal*



# Business Model - MRF Centered



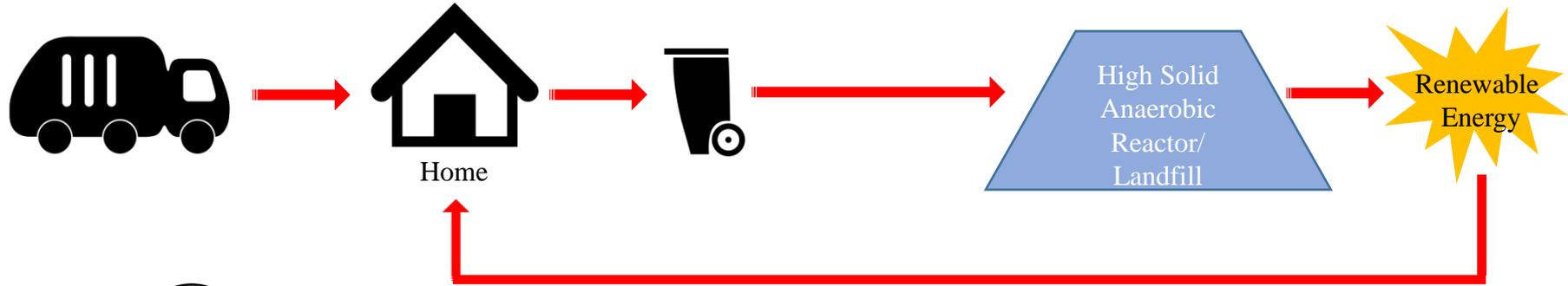
# Business Model – Landfill Centered



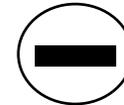
- *Convenience to residents*
- *High probability for future materials recovery – landfill mining, recover mined airspace*
- *Recycling credits toward State goal*

- *Perceived as less environmentally friendly*
- *Asset consumption /airspace*

# Business Model – Landfill Centered

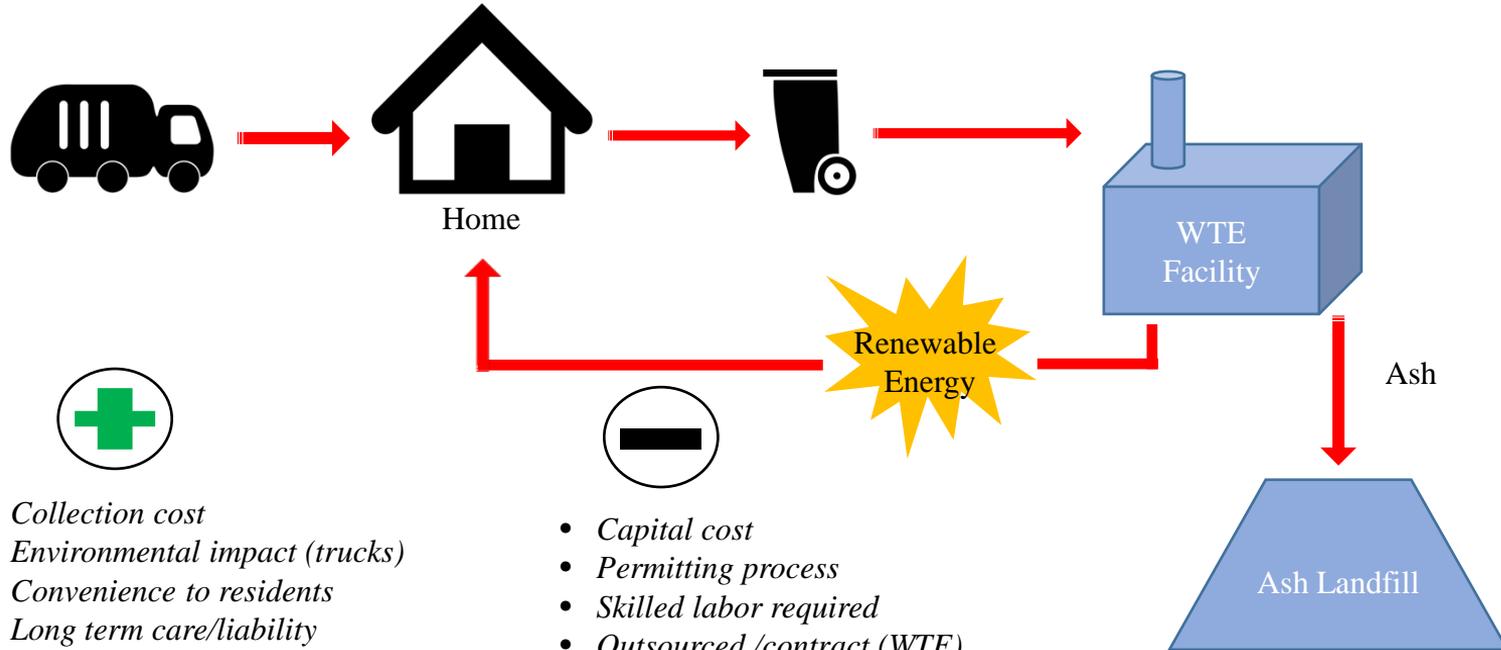


- *Collection cost savings*
- *Convenience to residents*
- *Environmental impact (trucks)*
- *High probability for future materials recovery – landfill mining, recover mined airspace*
- *Recycling credits toward State goal*
- *Fewer contracts to manage*



- *Perceived as less environmentally friendly*
- *Asset consumption/airspace*

# Business Model – WTE Centered



- *Collection cost*
- *Environmental impact (trucks)*
- *Convenience to residents*
- *Long term care/liability*
- *Flexibility*
- *Recycling credits toward State goal*
- *Prolong life of landfill*
- *Fewer contracts to manage*

- *Capital cost*
- *Permitting process*
- *Skilled labor required*
- *Outsourced /contract (WTE)*



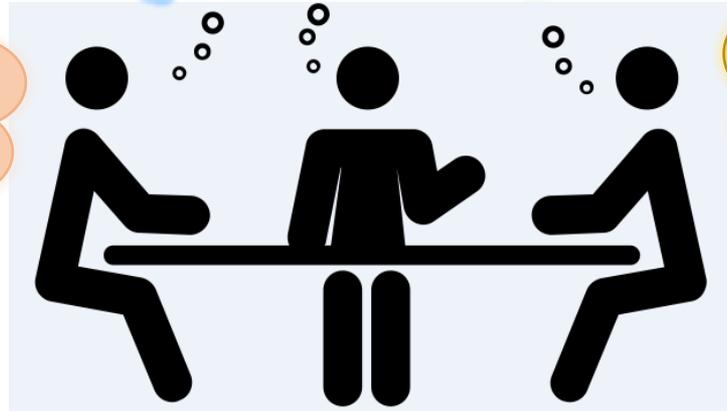
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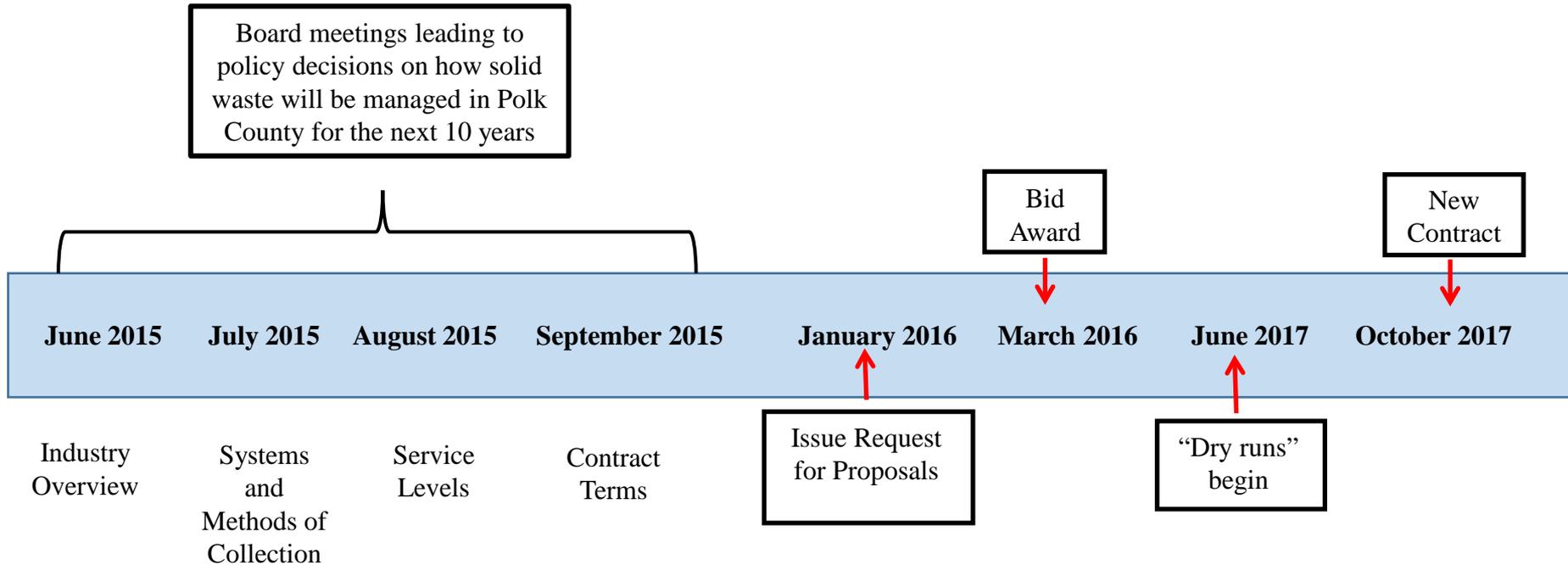
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# Projected Timeline 2017 Residential Collection Services



## Endnotes

- EPA SMM Web Academy “The Changing Waste Stream” November 2014
- “Inside the Garbage of the World Documentary” January 25, 2014
- EPA “Sources of Greenhouse Gas Emission”
- National Waste & Recycling “Recycling More vs. Recycling Right” video
- “Revolutionary Material Recovery Facility Underway in Montgomery” Montgomery, Alabama
- City of Houston “One Bin for All” system
- Florida Department of Environmental Protection Annual Reports
- “Junkyard Planet” Adam Minter, First U.S. Edition 2013
- “China’s Green Fence” Waste 360, October 2013
- University of Wisconsin, Global Symposium 2010
- University of Florida, Dr. Tim Townsend
- Jones Edmunds and Associates
- Thenounproject.com: Garbage Truck png (Heitor Varvaki Prazeres); Brainstorm png (Jessica Lock); House png (Simple Icons); Green Trash png (Justin Blake); Trash Can png (Randall Barriga); Recycling bin png (Garrett Knoll)