

Baltimore Clean Air Act

www.cleanairbmore.org/cleanairact

Baltimore Clean Air Act

- **Bill #18-0306 introduced by Councilman Reisinger on November 19th with 13 of 15 councilmembers sponsoring**
- **Assigned to Land Use & Transportation Committee**
- **Hearing scheduled for 1/30 at 5pm**

Authorized by Federal Government

Clean Air Act § 7416. Retention of State authority

Except as otherwise provided in sections 119(c), (e), and (f) (as in effect before the date of the enactment of the Clean Air Act Amendments of 1977), 209, 211(c)(4), and 233 (preempting certain State regulation of moving sources) **nothing in this Act shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution;** except that if an emission standard or limitation is in effect under an applicable implementation plan or under section 111 or 112, such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section.

Authorized by State Government

Md. ENVIRONMENT Code

TITLE 2. AMBIENT AIR QUALITY CONTROL

SUBTITLE 1. DEFINITIONS; GENERAL PROVISIONS

§ 2-104. Powers of political subdivisions

(a) Adopting ordinances, rules, or regulations. --

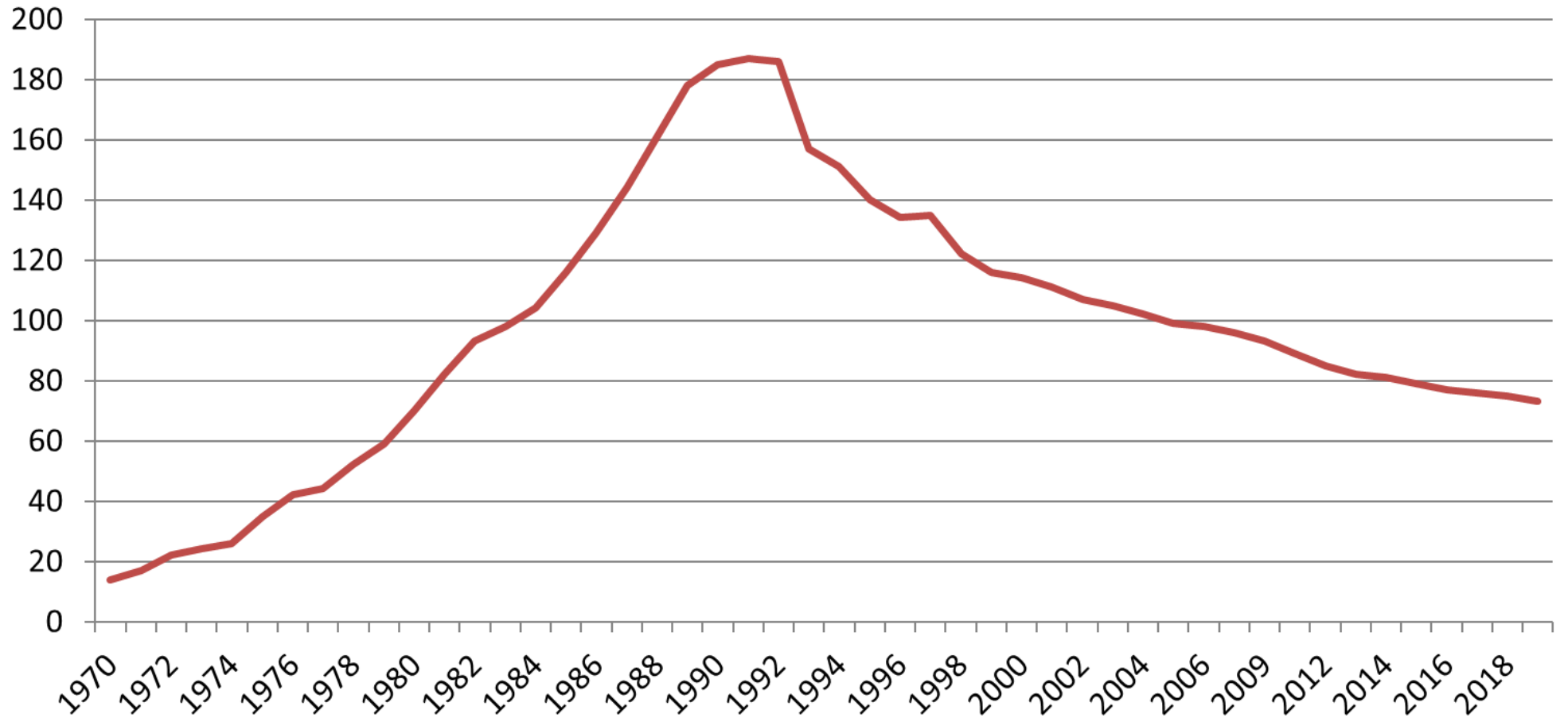
(1) Except as provided in this section, **this title does not limit the power of a political subdivision to adopt ordinances, rules, or regulations that set emission standards or ambient air quality standards.**

(2) A political subdivision may not adopt any ordinance, rule, or regulation that sets an emission standard or ambient air quality standard less stringent than the standards set by the Department under this title.

(b) Requesting rules or regulations. -- The governing body of any political subdivision may ask the Department to adopt rules and regulations that set more restrictive emission standards or ambient air quality standards in that political subdivision.

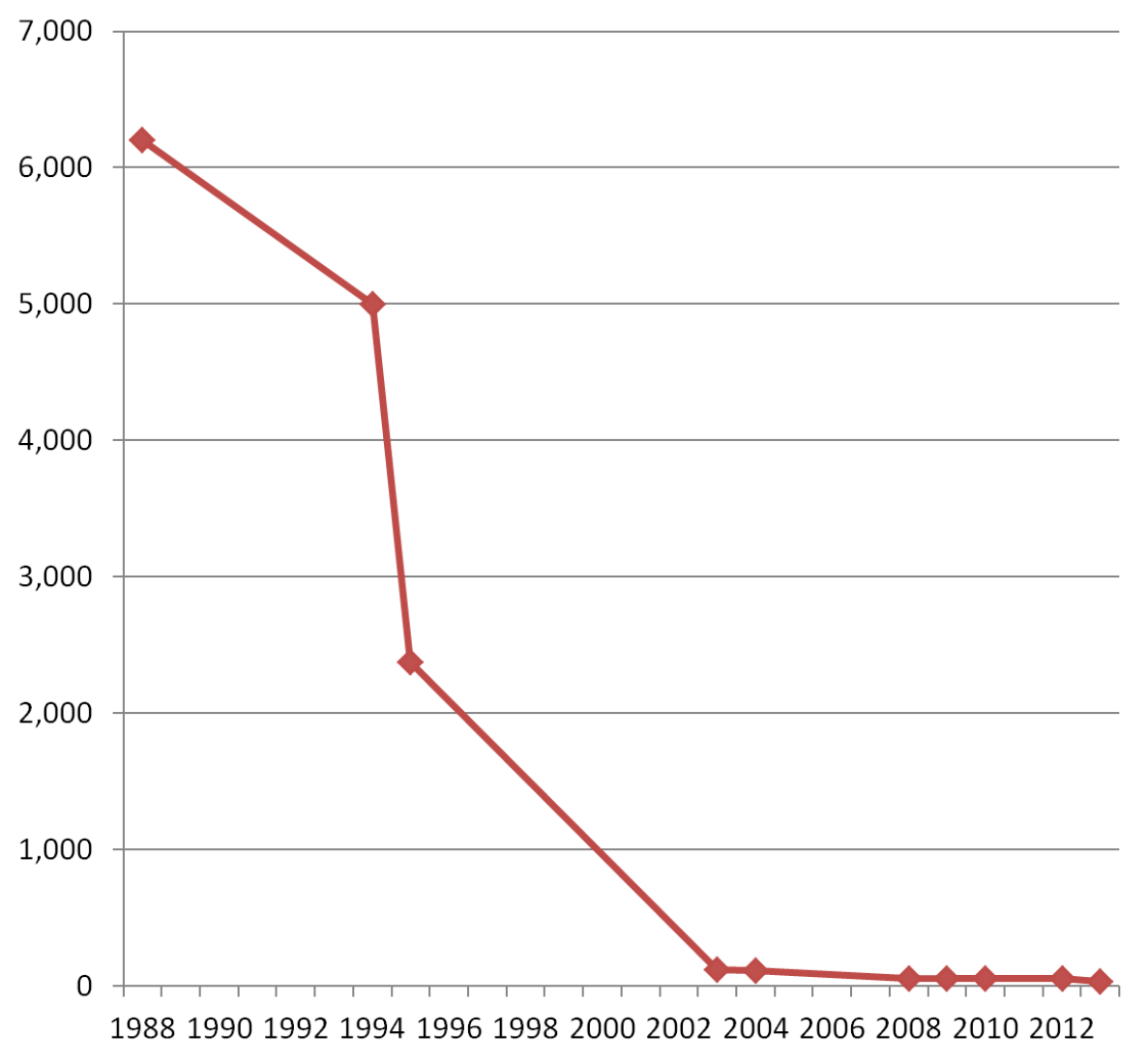
Incineration Going Out of Style

Number of Commercial Trash Incinerators Operating in the U.S.



Incineration Going Out of Style

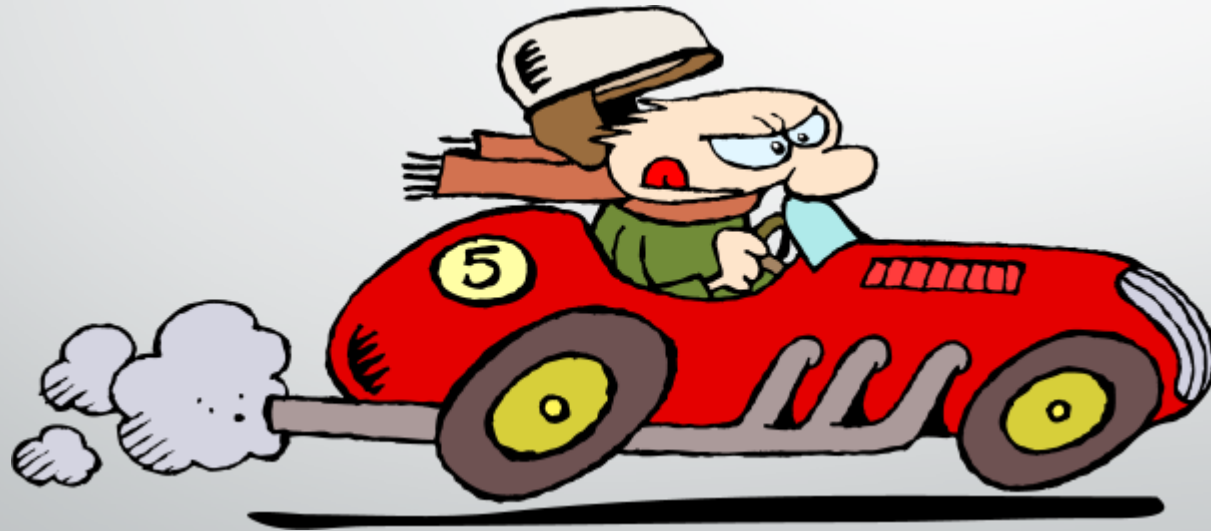
Operating Medical Waste Incinerators in U.S.



Baltimore Clean Air Act

- **Applies to any facilities burning 25+ tons/day of waste**
 - **Only current facilities: Wheelabrator & Curtis Bay Energy**
- **Install real-time monitoring equipment for 20 pollutants**
- **Post emissions data to a public website in real-time**
- **Meet North America's most protective emissions standards for mercury, sulfur dioxide (SO₂), nitrogen oxides (NO_x), and dioxins by 2022.**

Continuous Emissions Monitors



Continuous Emissions Monitors

- Only generally used for 3 pollutants: sulfur oxides (SO_x), nitrogen oxides (NO_x) and carbon monoxide (CO) plus opacity, oxygen and temperature
- Technology now exists to continuously monitor:

Ammonia (NH₃)

Carbon Dioxide (CO₂)

Hydrogen Sulfide (H₂S)

Acid Gases:

Sulfuric Acid (H₂SO₄)

Hydrofluoric Acid (HF)

Hydrochloric Acid (HCl)

Products of Incomplete Combustion (PICs):

Dioxins & Furans

Polycyclic Aromatic Hydrocarbons (PAHs)

Volatile Organic Compounds (VOCs)

Particulate Matter (PM)

Metals:

Antimony (Sb)

Arsenic (As)

Barium (Ba)

Cadmium (Cd)

Chromium (Cr)

Lead (Pb)

Manganese (Mn)

Mercury (Hg)

Silver (Ag)

Nickel (Ni)

Zinc (Zn)

...and more

Nitrogen Oxide (NOx) limits on Trash Incinerators in MD

205 ppm

Existing permit limit

170 ppm

New permit limit state was considering

166 ppm

Wheelabrator Baltimore trash incinerator's average in recent years

145-150 ppm

New permit limit

90-110 ppm

New limit for Northern VA incinerators

85-90 ppm

Average for incinerator in Montgomery County

45 ppm

Permit limit for new incinerators

Limit sought by Oct 2017 Baltimore City Council resolution (and ignored by MDE)

Limit required by proposed Baltimore Clean Air Act

Limit being met by a new incinerator in West Palm Beach, Florida

Limit set by MDE in two permits issued for proposed (and defeated) incinerators

(Energy Answers in Baltimore, and Wheelabrator in Frederick, MD)



Five Unanimous City Council Resolutions!

- 6/5/2017: Zero Waste
- 10/16/2017: Nitrogen Oxides (NO_x)
- 6/19/2017: Climate Change
- 5/14/2018: Solid Waste Planning
- 1/14/2019: Removing Financial Incentives for Trash Incineration

Who supports the Baltimore Clean Air Act?

- [American Lung Association](#)
- [Baltimore Beyond Plastic](#)
- [Baltimore Green Party](#)
- [Baltimore Nonviolence Center](#)
- [Blue Water Baltimore](#)
- [#BmoreLEADfree at Morgan State University's School of Community Health and Policy](#)
- [Cleaning, Active, Restoring Efforts \(C.A.R.E.\) Community Association](#)
- [Chesapeake Physicians for Social Responsibility](#)
- [Christ Church Harbor Apartments](#)
- [Christ Lutheran Church](#)
- [Climate Reality Project – Baltimore](#)
- [Communities United](#)
- [Echotopia, LLC](#)
- [Energy Justice Network](#)
- [Equity Matters](#)
- [Food & Water Watch](#)
- [Green Smart Cities Baltimore](#)
- [Hamden Community Council](#)
- Harbor Way East Condominium Association
- Harbor West Collaborative (Westport, Mt. Winans, Lakeland & Saint Paul neighborhoods)
- [Institute for Local Self-Reliance](#)
- [Maryland Environmental Health Network](#)
- [Marylanders for Energy Democracy and Affordability](#)
- [Otterbein Community Association](#)
- [Patterson Park Neighborhood Association](#)
- [Poverty & Race Research Action Council](#)
- [Progressive Maryland](#)
- [Sierra Club – Greater Baltimore Group](#)
- [Sierra Club Maryland Public Health Committee](#)
- [St. Ignatus Parish](#)
- [Teaching Artist Institute](#)
- [Thrive Baltimore](#)
- [The Towers at Harbor Court](#)
- [Urban Environmental Toxic Tour](#)

Wheelabrator Baltimore (a.k.a. BRESCO)

Burns up to 2,250 tons of trash per day

#1 air polluter in Baltimore City

Largest of two remaining trash
incinerators in MD

10th largest in the nation



In Baltimore City (2014), Wheelabrator was

#1 in Mercury

#1 in Hydrochloric Acid

#1 in Sulfur Dioxide

#1 in Lead

#1 in Nitrogen Oxides

#1 in Formaldehyde

#1 in Carbon Monoxide

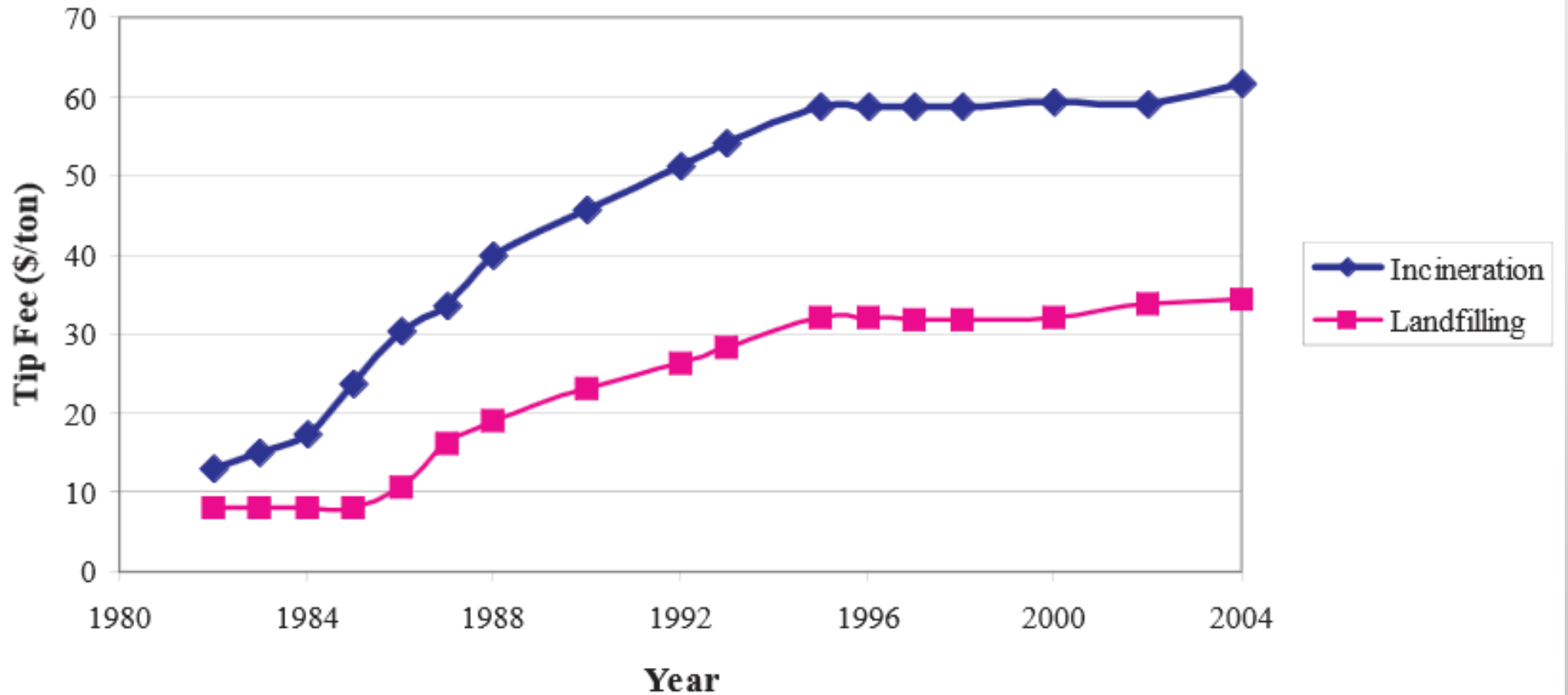


What is incineration?

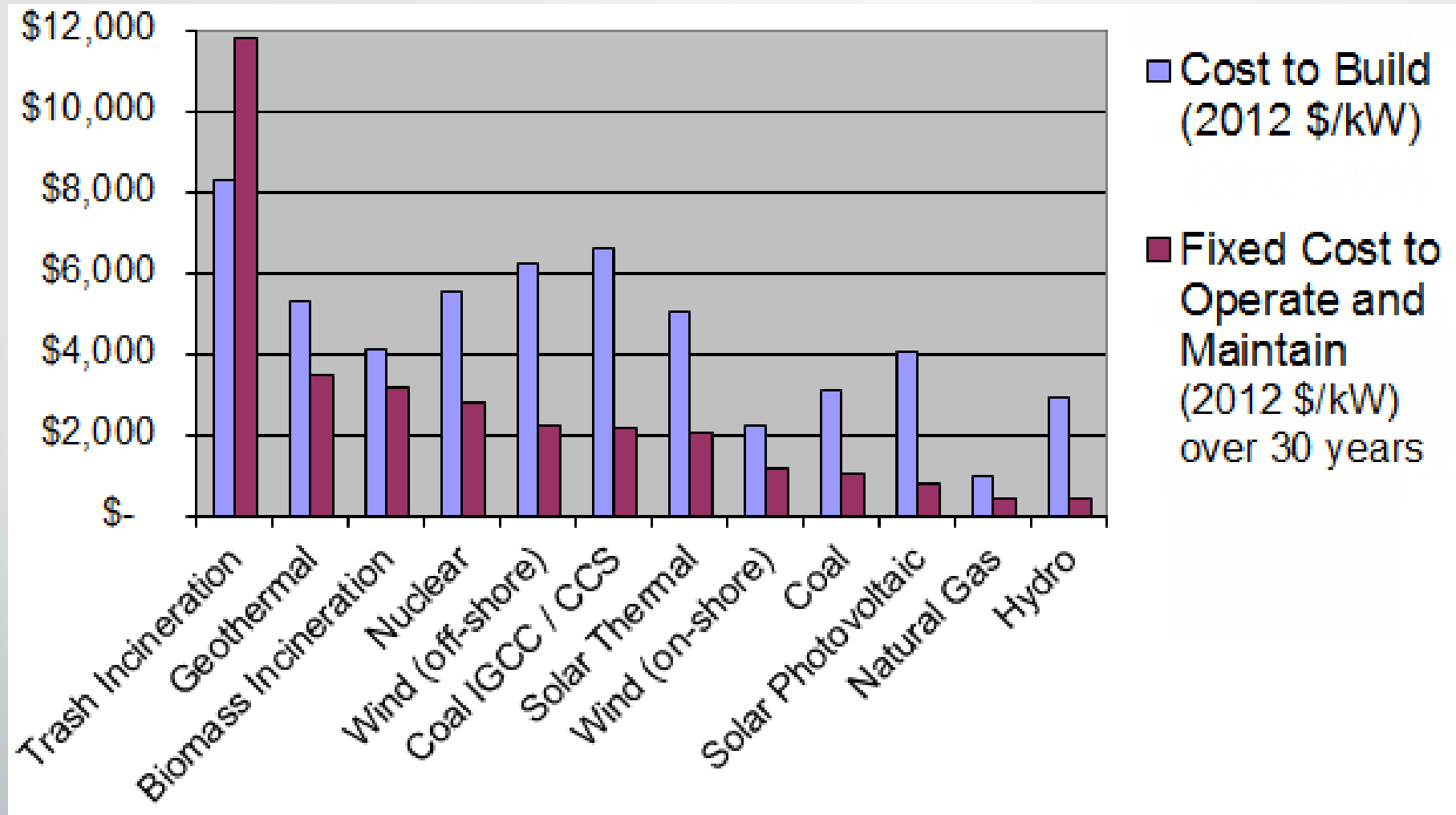


Most Expensive Way to Manage Waste

Figure 3. Landfill and Incinerator Tip Fees



Most Expensive Way to Make Energy

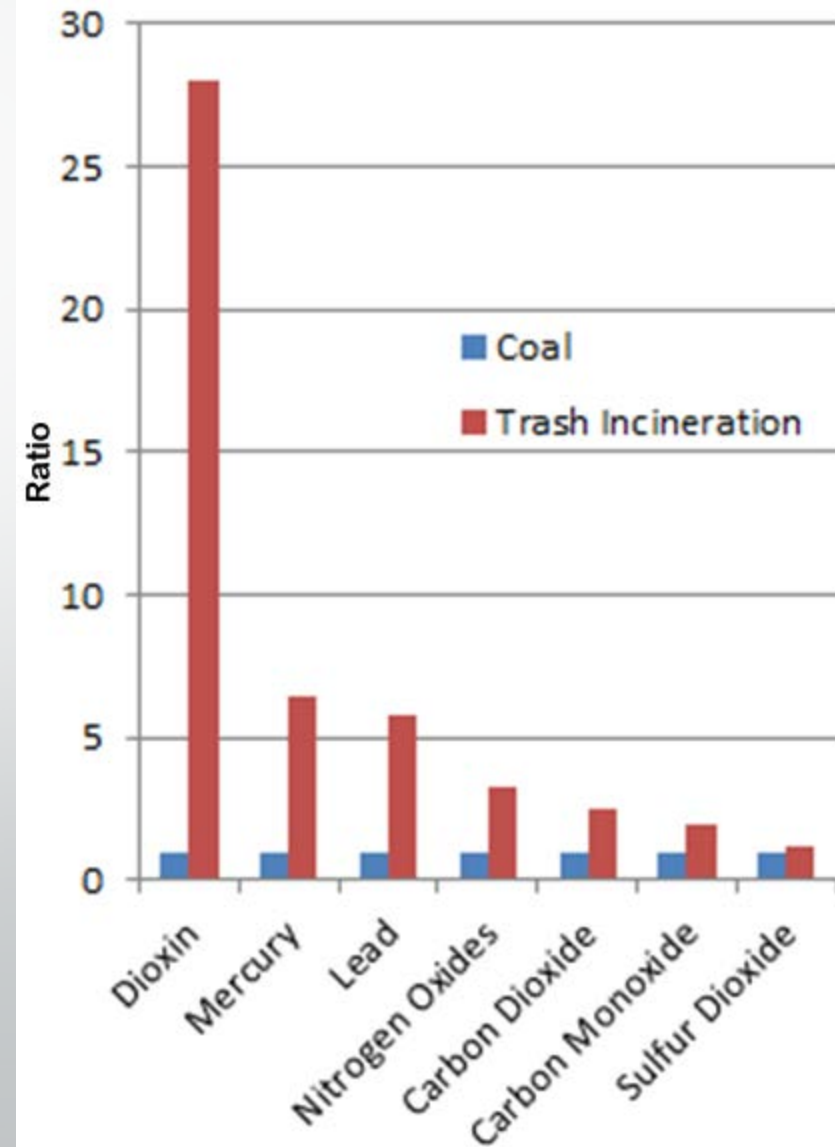


Source: "Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants," Energy Information Administration, April 2013, p.6, Table 1. Full report here: www.eia.gov/forecasts/capitalcost/pdf/updated_capcost.pdf

Most Polluting Way to Make Energy: Trash Incineration is Dirtier than Coal

Toxic Air Emissions are...

- **Dioxins / furans** (28 times as much)
- **Mercury** (6-14 times as much)
- **Lead** (6 times as much)
- **Nitrogen Oxides (NO_x)** (3.2 times as much)
- **Carbon Monoxide (CO)** (1.9 times as much)
- **Sulfur Dioxide (SO₂)** (20% worse)
- **Carbon Dioxide (CO₂)** (2.5 times as much)



Most Polluting Way to Manage Waste: Trash Incineration (with ash landfilling) is Worse than Landfills

Incineration is worse for: Landfills are worse for:

- Global warming
- Toxic emissions
- Nitrogen Oxide emissions (asthma)
- Particulate Matter emissions
- Acid rain
- Smog
- Cost
- Number of people impacted
- Environmental racism
- Jobs

- Ozone depletion
- Carcinogenic emissions
- Pesticide-like chemicals

Your Ash Has a Problem...

- For every 100 tons burned, 30 tons of toxic ash must be landfilled (the other 70 tons become air pollution)
- Any toxins caught in pollution controls are concentrated into the ash
- Trucked to landfill, and sometimes used as a cover material for trash

Source: British Society of Ecological Medicine



- **1-in-5 children in Baltimore have asthma**
- **~1-in-9 adults**
- **Baltimore ranks as the AAFA 33rd-worst “Asthma Capital”**



- Asthma costs American society **\$82 billion** annually
- **10 million** work days and almost **14 million** school days nationally
- By population percentage: **\$156 million** cost to Baltimore



And please note...

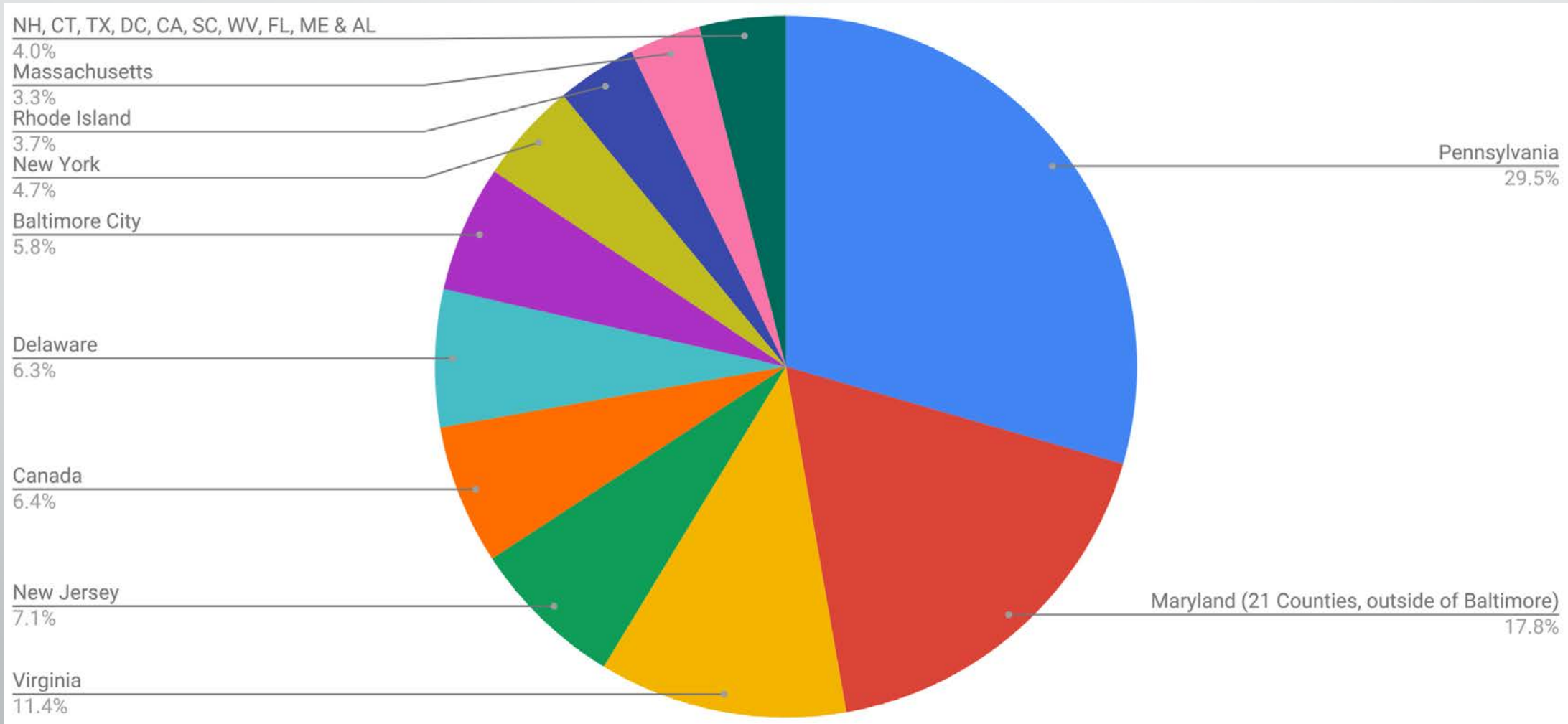
- **Baltimore also is home to Curtis Bay Energy, the nation's largest medical waste incinerator!**



- It burns medical waste from 18 states plus DC and Canada!



Curtis Bay Medical Waste Services incinerator – sources of waste burned (2017)



- **Most use non-burn alternatives now. Over 6,000 medical waste incinerators in the U.S. closed since 1988!**
- **Curtis Bay Energy is among fewer than 30 left in the nation.**
- **It's time to move on!**



- **2017 Medical waste generated in Baltimore City:**

3,824 tons

- **2017 Medical waste processed in Baltimore City:**

45,571 tons from 18 states plus DC and Canada



...why is Baltimore taking responsibility for 12 times as much medical waste as the city generates?

Most of the medical waste managed in Baltimore (58%) is by Stericycle, without incineration.



**But...where will
the waste go?**



THE ZERO WASTE HIERARCHY

RETHINK/REDESIGN

REDUCE

REUSE

RECYCLE/COMPOST

MATERIAL RECOVERY

RESIDUALS MANAGEMENT

(Biological treatment and stabilized landfilling)

UNACCEPTABLE

(Waste deregulation, incineration,
and "waste-to-energy")



The back end is still a landfill...

1. Direct landfilling
(bad, but better than incineration)
2. Incineration → toxic ash to landfill
(most polluting and expensive option)
3. Anaerobic digestion → landfill
(best option, economically and environmentally; avoids having gassy, stinky landfills)



Where does our trash go right now?



69% goes to the Wheelabrator
Baltimore trash incinerator



But...

75% of those
materials are
recyclable or
compostable

21% goes directly to
Quarantine Road Landfill



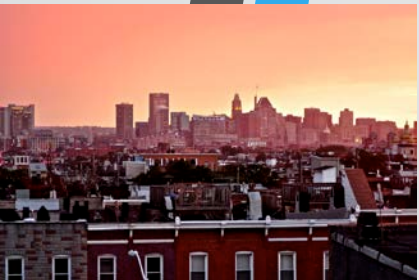
9% goes to
landfills in
Virginia

Source: Maryland Department of the Environment, 2016 data

Find out more at cleanairbmore.org,
like us on Facebook at Clean Air Baltimore Coalition,
and follow us on Twitter @cleanairbmore



Where does all the trash sent to Wheelabrator come from?



1. Baltimore City



9. Pennsylvania



8. Montgomery County



7. Frederick County



2. Baltimore County



6. Prince George's County



3. Anne Arundel County



4. Howard County

5. St. Mary's County



But just how much trash are we talking?

Trash Received by Wheelabrator in 2017

SOURCE	TONS	PERCENTAGE
Baltimore City	378,542	54
Baltimore	281,191	40
Anne Arundel	23,101	3
Howard	15,593	2
St. Mary's	2,915	0.4
North Carolina	1,345	0.2
PA, OH, WV, NJ, NY, VA, DE, and two more MD Counties (Prince George's & Montgomery)	3,020	0.4
Total	705,707	100

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← City and
← County
waste contracts
expire on
12/31/2021

**75% of what we
dispose of is either
reusable,
recyclable, or
compostable!**

Source: Environmental Protection Agency



Zero Waste Jobs

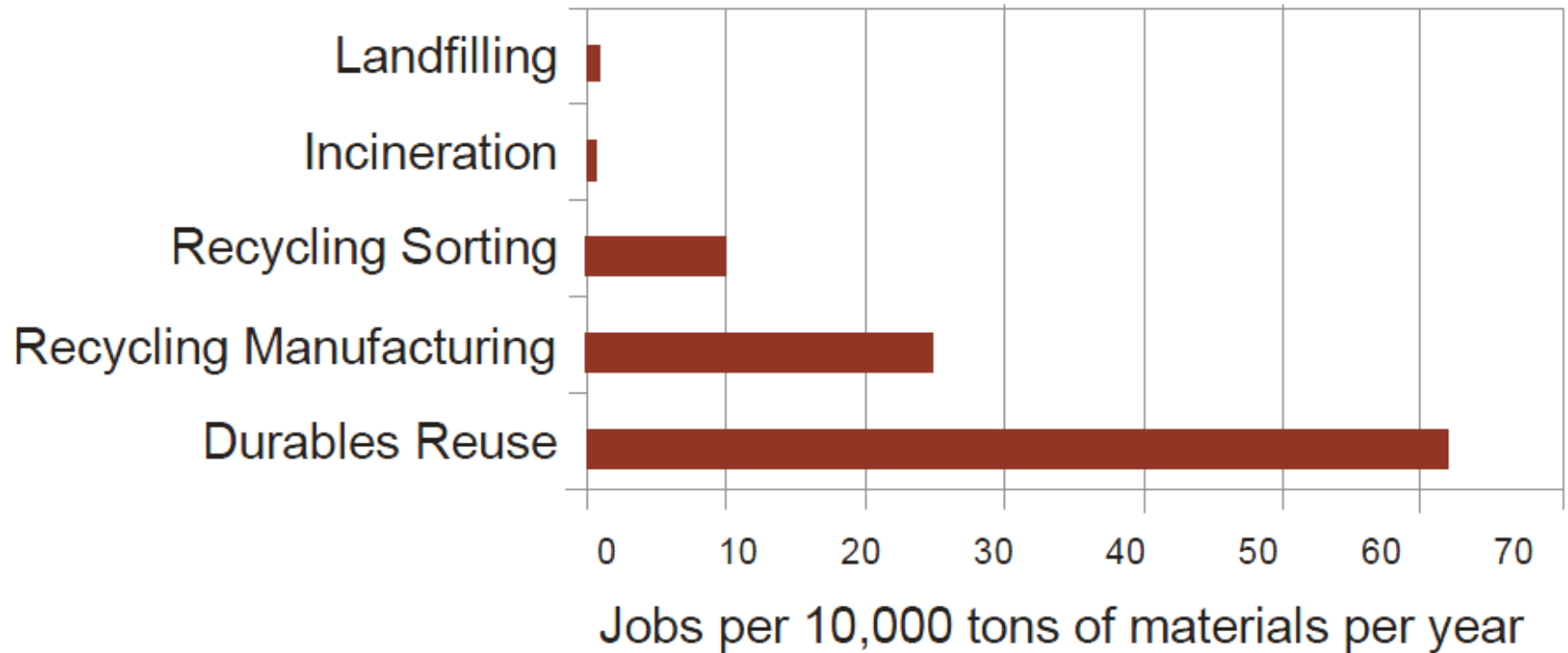


Deconstruction Crew, Second Chance, Baltimore, MD. Photo Credit: C. Seldman

**This would mean
more permanent,
part-time, and
temp jobs for
Baltimore City!**



Job Creation: Reuse & Recycling vs Disposal



Source: Institute for Local Self Reliance

Recycle America Material Recovery Facility – Elkridge, MD

- The recycling facility we currently use
- A need to move back to multi-stream recycling to make materials more valuable



Baltimore-based Recycling and Composting Facilities Are Needed

- Material recovery facilities cost \$8-15 million



Opportunity Costs of Baltimore City Waste Management: Next Three Years

**Burning the max
(200,000 tons) each year:**

2019: \$10,992,000

2020: \$11,266,000

2021: \$11,548,000

Total: \$33,806,000

Baltimore City DPW handles about 300,000 tons of municipal solid waste (MSW) annually

About half the weight delivered each year to Quarantine Road is toxic ash

**Building a material recovery
facility similar to San Francisco
(227,500 tons minimum)
each year:**

Total: \$35,000,000 (2016)

Facility has capability to double annual processing (455,000 tons)

San Francisco mandated workers must be from surrounding community

Entry wage: ~\$25/hour

Workers are unionized

Workers gain equity after one year

Baltimore no longer would import waste from other municipalities unless they are recyclables



What's the cost to modernize Wheelabrator's air pollution controls?



\$70 million initially
\$11 million annually

- **Questions?**
- **Comments?**

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