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*...helping communities protect  
themselves from polluting energy  
and waste technologies*



[www.ChesterResidents.org](http://www.ChesterResidents.org)

# In this presentation...

## How is Delco's waste managed?

- How we got here
- Delaware County Solid Waste Authority
- Where our waste goes; where waste burned in Delco comes from
- DCSWA's Rolling Hill's Landfill

## Why act now?

- County's waste contract is coming up
- Municipalities are passing Zero Waste Resolutions, urging transition from incineration to Zero Waste

## Why is Covanta trash burning a problem?

- Largest incinerator in U.S. with fewest pollution controls
- Leading air polluter in Delco, much worse than DELCORA
- Covanta's emissions misinformation
- Violations
- Health impacts
- Environmental racism

## Why is incineration a problem in general?

- Incinerator life expectancy
- Why is incineration harmful?
- Why is it worse than landfilling?
- What about global warming?
- What about emissions from extra trucking?

## What are the alternatives?

- Where would our waste go if we don't burn it in Chester?
- Is there time to switch away from incineration so quickly?
- If Delco stops sending trash to the incinerator, won't Covanta just replace it with other people's trash?
- Will ending the county's contract shut Covanta down?
- Isn't it better to contract with Covanta and force them to install state-of-the-art pollution controls?

## What will it cost to stop incinerating?

- Will it cost more to switch to landfilling?
- Where will the money come from?
- What does it cost to *keep* incinerating?

## Tell me more about Zero Waste plans!

- What is Zero Waste and the Zero Waste Hierarchy?
- Unit-based Pricing: the most effective and cost-effective way to quickly reduce waste
- What happens to the "leftovers" on the path to Zero Waste?

## What about Chester?

- Does Covanta provide many jobs for Chester residents?
- What do Chester residents want us to do?
- Does passing a resolution mean we're telling Chester what to do?
- What will happen to Chester City if Delaware County stops burning trash at Covanta?

# How we got here...

In 1954, the county created the Delaware County Incinerator Authority to oversee three incinerators that operated here from the late 1950s through 1979, when they closed.

Two of them were transformed into transfer stations, one in Chester Township and another in Marple.

# How we got here...

In the late 1980s, former Chester City mayor John “Jack” Nacrelli, convicted racketeer and organized crime boss, controlled Chester City after his prison term and turned Chester City Council away from the city’s proposed waste project and got them to back a Delaware County plan to build the incinerator in Chester.

Bribes and threats were made, and unusually large fees were paid to the underwriters and special counsel for the city to arrange the deal.

A host community agreement was signed by the City of Chester in January 1989. The incinerator started operating in 1991.





# How we got here...

An incinerator ash dump planned for an abandoned quarry off of Township Line Road was defeated by local opposition.

1984: The Delaware County Incinerator Authority bought the Colebrookdale Landfill in Earl Township, Berks County at the direction of county council.

1985: The Delaware County Incinerator Authority was renamed the Delaware County Solid Waste Authority (DCSWA).



1998: The landfill was renamed Rolling Hills Landfill.

Sources: Kathleen E. Carey, “Trash-disposal crisis means consumers will pay more,” Delaware County Times, Jan. 27, 2019. [https://www.delcotimes.com/news/local/trash-disposal-crisis-means-consumers-will-pay-more/article\\_026449cc-1ffb-11e9-a809-4798edf4e0cd.html](https://www.delcotimes.com/news/local/trash-disposal-crisis-means-consumers-will-pay-more/article_026449cc-1ffb-11e9-a809-4798edf4e0cd.html);

Ash landfill location:

<https://static1.squarespace.com/static/5a858efeace8645cabb72cde/t/5ae4490a1ae6cfa83d236fa8/1524910346748/Arata-Larry-5th-District-Candidate-Questionnaire.pdf>

# Delaware County Solid Waste Authority has a Contract with Covanta which:

- Promises at least 300,000 tons/year of DelCo trash to burn at Covanta in Chester or DCSWA has to pay Covanta, anyway (“put or pay”)
  - “Put or pay” clauses punish waste reduction. If the county reduces waste by more than about 20%, it must pay Covanta to not use them.
- Covanta is given the right to dump up to 450,000 tons/year of incinerator ash at DCSWA’s Rolling Hills Landfill
- Covanta offers discounted burning in Chester in exchange for extra cheap ash dumping at the county’s landfill

Delco has been sending an average of 360,000 tons/year to Covanta from 2016-2020, though crossed a contract threshold of 370,000 tons in 2020 for the first time (due to pandemic), sending 380,000 tons and having to pay a higher rate for the excess 10,000 tons.

From 2005-2015, Covanta brought in between 500-600K tons/year of incinerator ash from Chester, Plymouth and their incinerators in NJ, but has averaged 451,000 tons/year from 2016-2020.

This “ash for cash” deal is why DCSWA is waiting for DEP approval of their landfill expansion before negotiating a new contract with Covanta.

# How this affects Delco municipalities...

- The DCSWA/Covanta [contract](#) expires 4/30/2022. Negotiations on a new contract could start in the June/July 2021 time frame as soon as PA DEP grants the permit for the final expansion of DCSWA's Rolling Hills Landfill.
- Municipalities have service agreements with the Delaware County Solid Waste Authority to send certain amounts of trash to the county's two trash transfer stations at \$58/ton (or \$53/ton if trucked straight to Covanta)
- Trash goes from the transfer stations to be burned at Covanta in Chester, then the ash is buried in Rolling Hills Landfill in Berks County.



# Delaware County Solid Waste Authority undergoing many changes

- 7-person board with rotating terms.
- Current county council appointed two new members in October 2020 (John Butler and Barbarann Keffer).
- Another board member resigned in February 2021 and county councilmember Christine Reuther was appointed in his place until October 2021, when her seat and another will be filled by county council with new people.
- DCSWA Solicitor Gillam was found to be triple-dipping and was replaced in April.
- CEO Joseph Vasturia was going to retire in summer 2021 once landfill expansion permit is approved, but [passed away](#) on 5/5/2021.

# Where DelCo Municipal Waste Goes (2020)

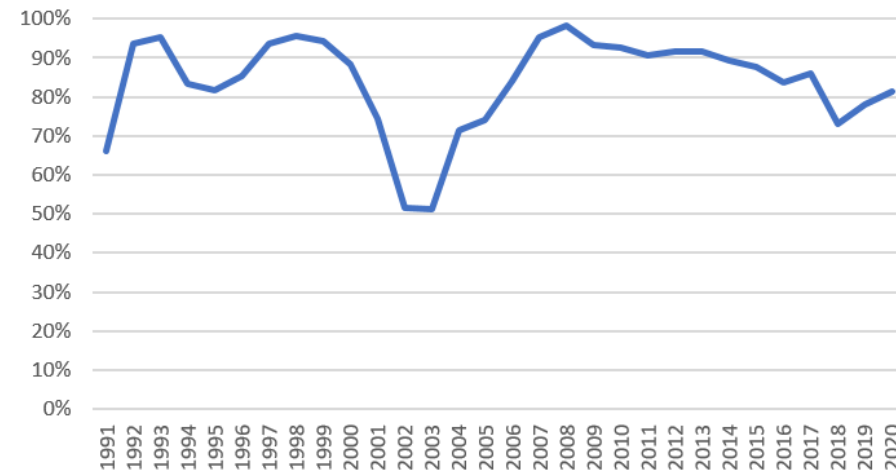
Incinerator or Landfill	County	Tons	%
<u>Covanta Delaware Valley</u>	Delaware	380,123	81%
Fairless Landfill	Bucks	81,275	17%
<u>Covanta Plymouth Renewable Energy</u>	Montgomery	5,032	1%
<u>DCSWA - Rolling Hills Landfill</u>	Berks	1,187	0%
Pioneer Crossing Landfill	Berks	139	0%
Chester County SWA Lanchester Landfill	Chester	14	0%

**red** = incinerators

underlined = DCSWA facilities

The % of Delco trash going to Covanta Delaware Valley has varied a lot, from 51% to 98% →

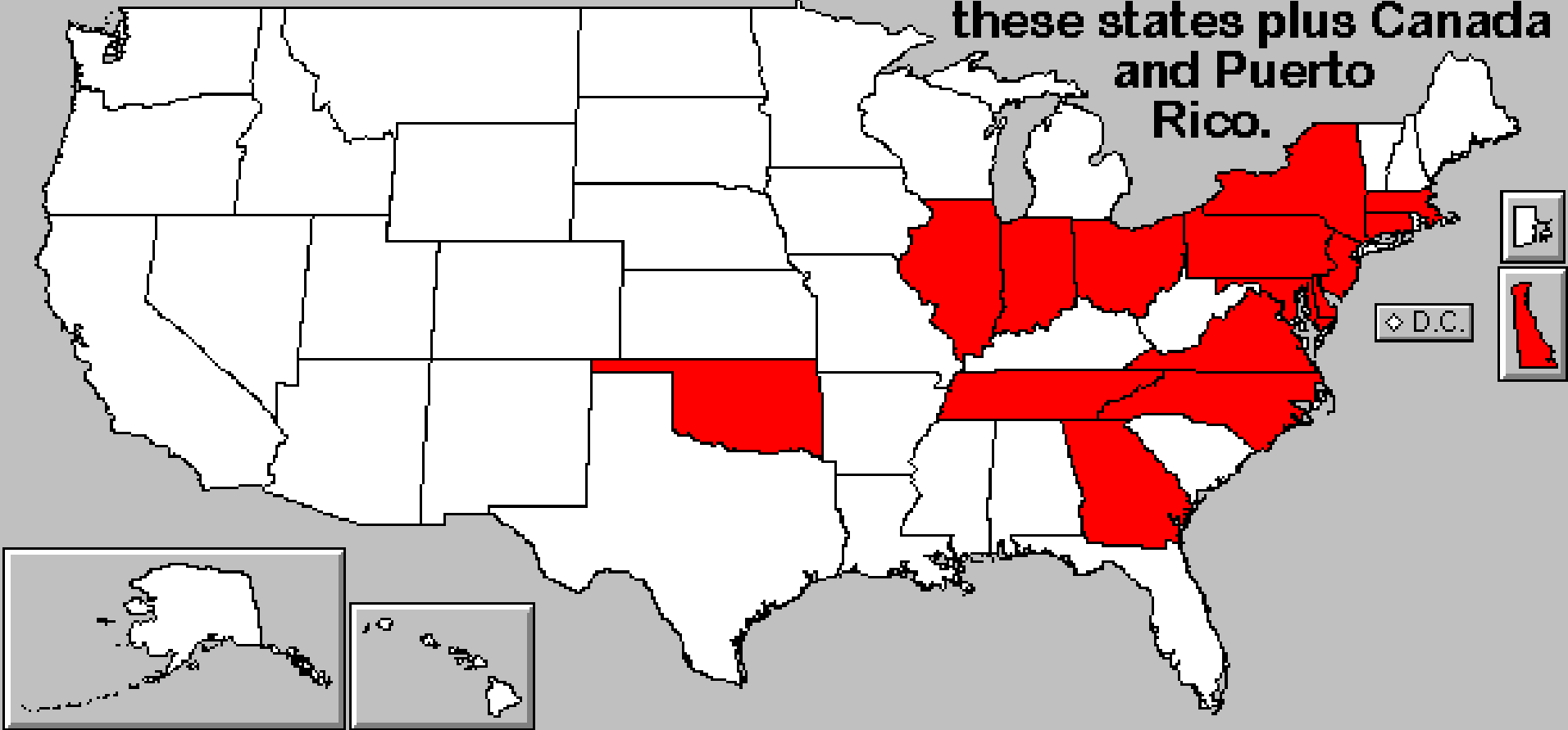
% of Delco trash to Covanta Delaware Valley incinerator



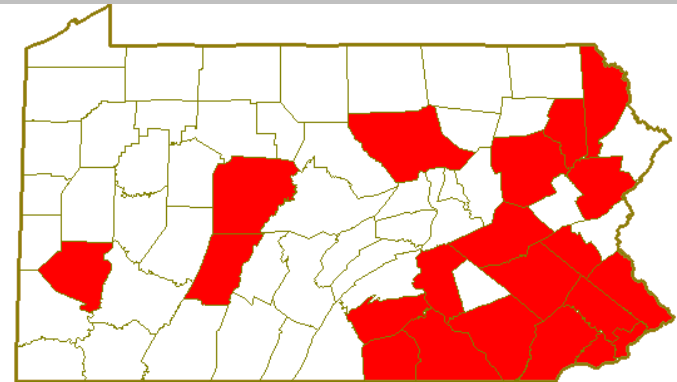
Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

**Covanta's incinerator in Chester, PA has burned waste from these states plus Canada and Puerto Rico.**



**...and within  
PA, from these  
counties...**

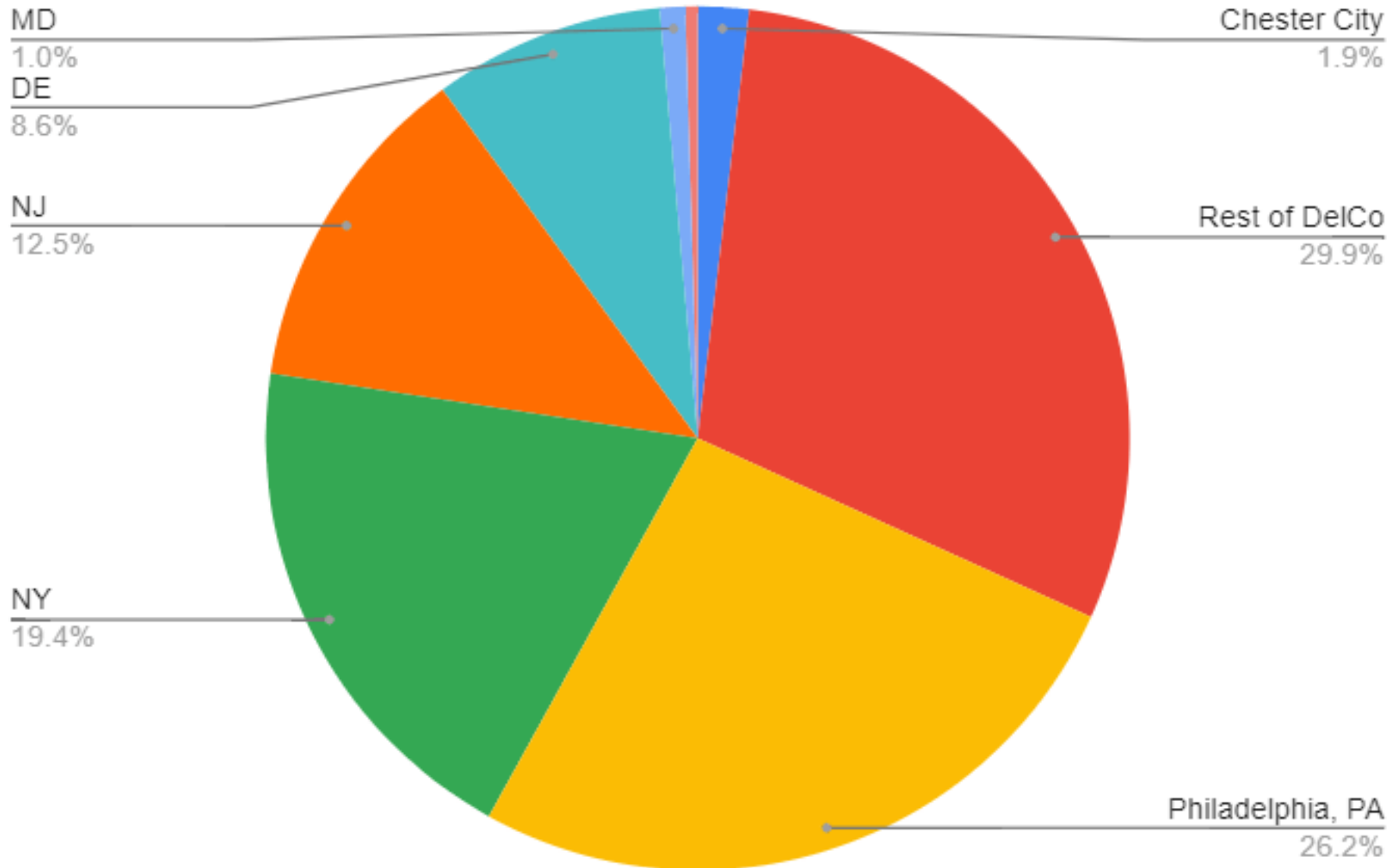


Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

# Waste Burned at Covanta (1991-2020)

[most is from Delco, Philly, NY & NJ]



Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

# Waste Burned at Covanta (2020)

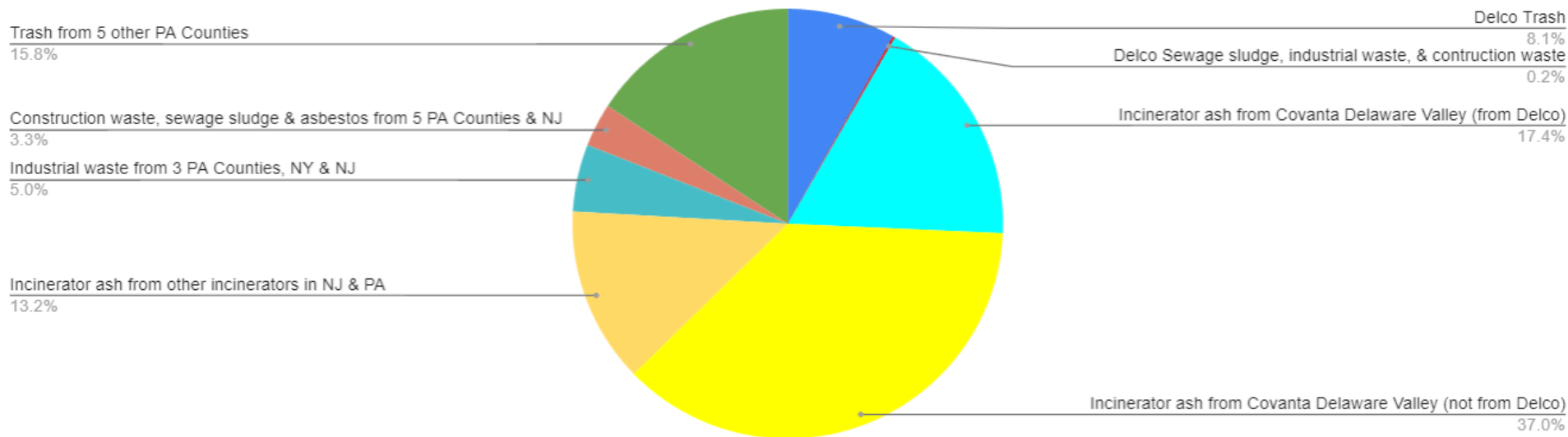
31%	Philadelphia City, PA
31%	Delaware County, PA
17%	DE (rerouted NYC trash)
16%	NJ
4%	NY
2%	Ocean City, MD
0.2%	4 other PA Counties
0.01%	VA
0.003%	NC

Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

# Where the Waste to DCSWA's Rolling Hills Landfill Has Come From

Waste Disposed at Delaware County Solid Waste Authority's Rolling Hills Landfill in Berks County (1989-2020)



- Only 26% of the waste in Delco's landfill is from Delco – highly unusual!
- 74% is from other counties and states, including biomass incinerator ash from Reading and sewage sludge incinerator ash from Passaic County, NJ.
- Landfill is projected to be filled by October 2022 if not expanded.
- One final (vertical) expansion pending DEP approval, which could buy up to 10 years of space under status quo disposal rates.

Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

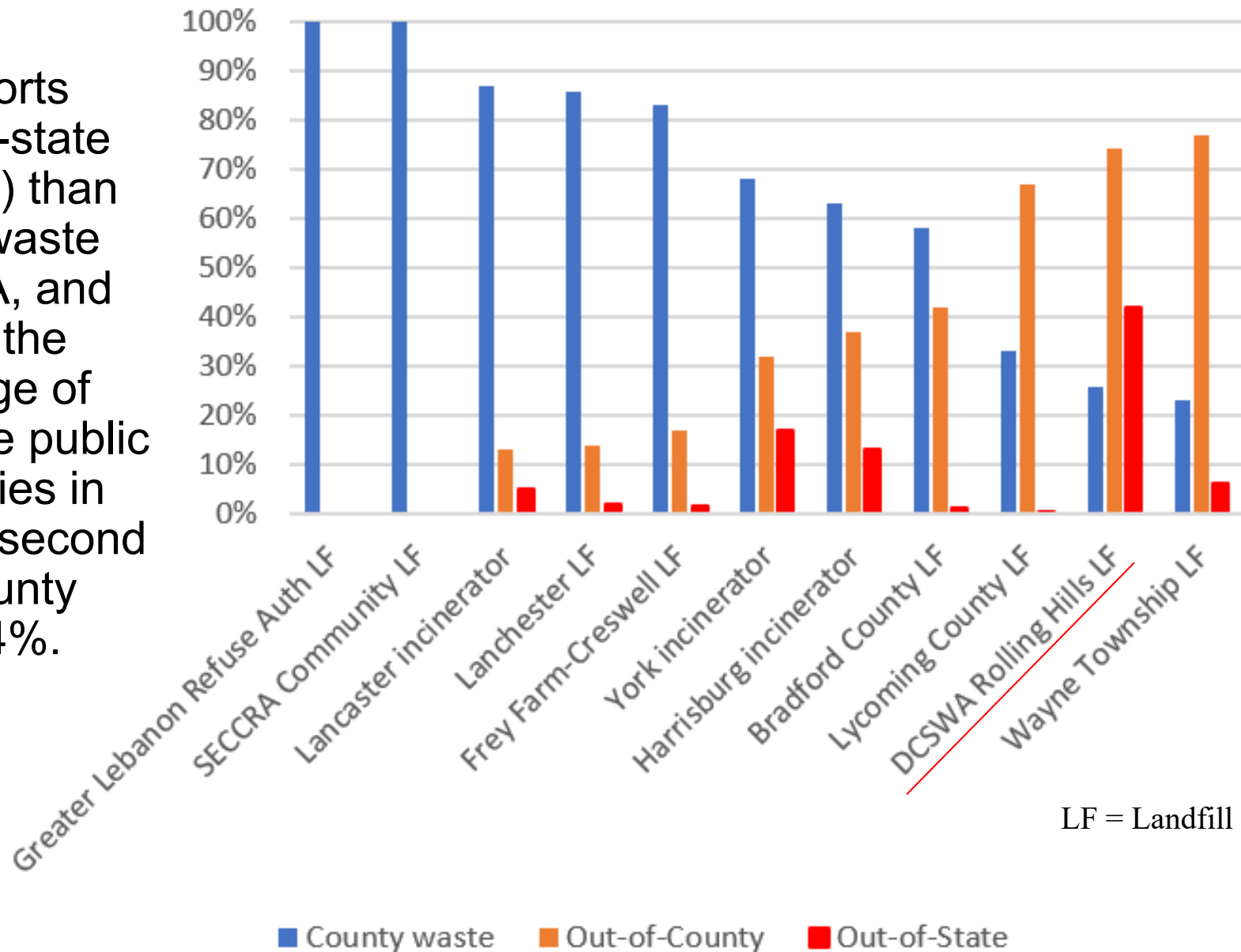


# **DCSWA's Rolling Hills Landfill is run like a private facility**

- **Publicly-owned** waste facilities (usually owned by counties or regional authorities) tend to primarily, or only, take waste from within their county/region, conserving space for future use.
- **Privately-owned** waste facilities tend to import as much as possible to maximize profits.
- **Pennsylvania is the largest importer of trash**, in part because so many landfills have been privatized.
- Since 1988, 40% of the waste dumped and burned in PA has been from out-of-state. This is mainly private facilities.
- DCSWA has managed Rolling Hills Landfill like a private waste facility, giving away nearly three quarters of the space to out-of-county and out-of-state dumpers.

## PA Public Waste Facility Import %s

Rolling Hills Landfill imports more out-of-state waste (42%) than any public waste facility in PA, and higher than the state average of 40%. Of the public waste facilities in PA, they're second in out-of-county waste, at 74%.



Source: PA Dept of Environmental Protection

[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

# Why act now??



- County's waste contract with Covanta is up next year, with major decision-making pending soon
- Municipalities are passing Zero Waste Resolutions, urging transition from incineration to Zero Waste

# **Municipalities saying it's time to look beyond incineration**

Zero Waste Resolutions passed in:

3/8/2021: **Swarthmore Borough**

4/15/2021: **Media Borough**

4/21/2021: **Lansdowne Borough**

4/22/2021: **Nether Providence Township**

Others considering it...

Find copies and a model resolution at:  
**[www.ChesterResidents.org/resolutions/](http://www.ChesterResidents.org/resolutions/)**

# Why is Covanta's trash burning a problem?



# Quick basics on the incinerator

## Names:

Delaware Valley Resource Recovery Facility  
Covanta Delaware Valley

## Address:

10 Highland Ave  
Chester, PA 19013 ([map](#))

## Owners:

1991 – April 1997:	Waste Resource Energy Inc. (Westinghouse)
May 1997 – May 2005:	American Ref-Fuel
June 2005 – present:	Covanta Energy

## Descriptions:

Trash-to-steam	(improper PR term; it's much more than steam)
Waste-to-energy (WTE)	(improper PR term; every ton becomes ash & air
Energy from waste (EfW)	pollution, not literally turned into energy, <a href="#">see more</a> )
Resource recovery facility	(resources are destroyed; little is recovered)
Trash incinerator	(EPA recognizes this term as meaning the same as its legal term: Municipal waste combustor)

**Size:** 90 MW (small for a power plant); Can burn ~3,500 tons/day (largest in U.S.)  
(still misreported to shareholders and PA DEP as 2,688 tons/day, even though they've burned much more consistently since 1997)



# Largest Trash Incinerators in the U.S. (by size)

<u>St</u>	<u>City</u>	<u>Name</u>	<u>Burners</u>	<u>Tons/Day</u>
PA	Chester	Delaware Valley Resource Recovery Facility	6	3,510
FL	St. Petersburg	Pinellas County Resource Recovery Facility	3	3,150
VA	Lorton	I-95 Energy-Resource Recovery Facility (Fairfax)	4	3,000
HI	Honolulu	Honolulu Resource Recovery Venture— HPOWER	3	3,000
NJ	Newark	Essex County Resource Recovery Facility	3	2,800
MA	West Wareham	SEMASS Resource Recovery Facility	3	2,700
NY	Westbury	Hempstead Resource Recovery Facility	3	2,671
FL	Miami	Miami-Dade County Resource Recovery Facility	4	2,592

**No other trash incinerator in the U.S. has  
more than 4 boilers or burns as much waste.**

Source: U.S. operating trash incinerators, listed by size: [www.energyjustice.net/incineration/usplants](http://www.energyjustice.net/incineration/usplants); Industry directory available at [www.energyrecoverycouncil.org/wp-content/uploads/2019/10/ERC-2018-directory.pdf](http://www.energyrecoverycouncil.org/wp-content/uploads/2019/10/ERC-2018-directory.pdf)

# Covanta Lacks Basic Pollution Controls

In March 2009, when an EPA inspector (Ms. Horgan) asked Covanta's Gene Bonner why they don't have the pollution controls that their other plants have, Covanta responded that "it costs a lot of money" and would create "operational issues."

Ms. Horgan asked if there is any control equipment that would be practical to reduce emissions. Mr. Bonner stated that practical is a matter of money to business people. He stated that Covanta doesn't have a big issue for dioxins or mercury so a carbon system is not needed. Ms. Horgan asked about additional NO<sub>x</sub> control. Ms. Horgan mentioned that NO<sub>x</sub> emissions were 1119 tons in 2003 and 1257 tons in 2005. Ms. Horgan asked if there was a system to bring down these NO<sub>x</sub> emissions. Mr. Bonner stated that putting in a urea system would; but, that it costs a lot of money and also introduces additional operational issues. He stated that the more equipment that is added, the more potential for operational issues at some time. He said that the NO<sub>x</sub> emissions could be brought down; but, the equipment is not easily operated.

# Covanta Lacks Basic Pollution Controls

Covanta's incinerator in Chester uses the fewest pollution control devices of any incinerator in Pennsylvania and the fewest of any in their fleet of 39 U.S. incinerators.

## LACKING:

- **Selective Non-Catalytic Reduction** to reduce the nitrogen oxides (NO<sub>x</sub>) that cause asthma.
- **Carbon injection** to remove additional toxic metals and dioxins.

Out of 71 commercial trash incinerators in the U.S. operating as of May 2021, at least 56 use carbon injection and at least 48 use some form of NO<sub>x</sub> controls. Why does the nation's largest one lack these protections?

# Covanta Lacks Basic Pollution Controls

## Pennsylvania Incinerators:

State	City	Facility Name	Tons/Day	# of Controls	Air Pollution Control Systems
PA	Bainbridge	Lancaster County Resource Recovery Facility	1,200	5	SDA; FF; SNCR; CI; FSI
PA	Morrisville	Wheelabrator Falls Inc.	1,500	4	SDA; FF; SNCR; CI
PA	Conshohocken	Covanta Plymouth Renewable Energy	1,216	4	SDA; FF; SNCR; CI
PA	Harrisburg	Harrisburg Resource Recovery Facility	800	4	SDA; FF; SNCR; CI
PA	York	York Resource Recovery Center/Montenay York	1,344	3	SDA; FF, CI
PA	Chester	Delaware Valley Resource Recovery Facility	3,510	2	SDA; FF

For a chart of what the air pollution control system acronyms mean, see [www.ejnet.org/chester/pollutioncontrol.html](http://www.ejnet.org/chester/pollutioncontrol.html)

Source: Energy Recovery Council 2014 and 2010 Directories of Waste-to-Energy Plants  
[http://energyrecoverycouncil.org/wp-content/uploads/2016/01/ERC\\_2014\\_Directory.pdf](http://energyrecoverycouncil.org/wp-content/uploads/2016/01/ERC_2014_Directory.pdf) and  
[https://web.archive.org/web/20150919084730/http://www.wte.org/userfiles/file/ERC\\_2010\\_Directory.pdf](https://web.archive.org/web/20150919084730/http://www.wte.org/userfiles/file/ERC_2010_Directory.pdf)

# Covanta Lacks Basic Pollution Controls

State	City	Facility Name	Tons/Day	# of Controls	Air Pollution Control Systems
NJ	Newark	Essex County Resource Recovery Facility	2,800	6	SDA; FF; ESP; SNCR; CI; CYC
OR	Brooks	Marion County Solid Waste-to-Energy Facility	550	6	SDA; FF; SNCR; CI; CYC; DSI
MA	West Wareham	SEMASS Resource Recovery Facility	2,700	5	SDA; ESP; COHPAC (Units 1 & 2) SDA; FF; SNCR (Unit 3)
NY	Niagara Falls	Niagara Falls Resource Recovery Facility	2,250	5	SDA; FF; SNCR; CI; ESP
FL	Fort Myers	Lee County Resource Recovery Facility	1,836	5	SDA; FF; SNCR; CI; FGR
MD	Dickerson	Montgomery County Resource Recovery Facility	1,800	5	FSI; SDA; FF; SNCR; CI
PA	Bainbridge	Lancaster County Resource Recovery Facility	1,200	5	SDA; FF; SNCR; CI; FSI
OK	Tulsa	Walter B. Hall Resource Recovery Facility	1,125	5	CI; CYC; FF; SNCR; SDA
MA	Agawam	Pioneer Valley Resource Recovery Facility	408	5	FGR; DSI; FF; CI; CYC
VA	Lorton	I-95 Energy-Resource Recovery Facility (Fairfax)	3,000	4	SDA; FF; SNCR; CI
NY	Westbury	Hempstead Resource Recovery Facility	2,671	4	SDA; FF; SNCR; CYC
FL	Miami	Miami-Dade County Resource Recovery Facility	2,592	4	SDA; FF; SNCR; CI
26 other Covanta incinerators - nearly all have SNCR and Carbon Injection					
PA	Chester	Delaware Valley Resource Recovery Facility	3,510	2	SDA; FF

Nearly all of Covanta's 39 incinerators have these pollution controls. Several have 5-6 pollution control devices. Chester's has just two.

No new incinerator could be built these days without these protections. Bringing this old plant to modern standards would be cost-prohibitive.

Source: Energy Recovery Council  
2010 Directory of Waste-to-Energy Plants

[https://web.archive.org/web/20150919084730/http://www.wte.org/serfiles/file/ERC\\_2010\\_Directory.pdf](https://web.archive.org/web/20150919084730/http://www.wte.org/serfiles/file/ERC_2010_Directory.pdf)

# Covanta is a Top Air Polluter

Covanta is the #1 air polluter in Chester City.

They're the #1 or #2 air polluter in Delaware County for most chemical pollutants that they report releasing (see next slide).

They're one of the top air polluters in the entire 7-county region surrounding Philadelphia. All five trash incinerators in this region are among the region's top ten air polluters.





# Covanta Delaware Valley's Air Emissions

<b>Pollutant</b> (in pounds except CO <sub>2</sub> e)	<b>Emissions</b> (2016-19 avg pounds/year)	<b>Rank in DelCo</b>	<b>Health Effects</b>
<b>Global Warming Pollution</b> (in tons of CO <sub>2</sub> equivalents)	1,020,104	4	Extreme weather, disease, crop damage, species extinction
<b>Nitrogen Oxides</b>	2,337,532	1	Asthma attacks, chronic respiratory disease & stroke
<b>Carbon Monoxide</b>	778,951	1	Headaches, dizziness; increases lifetime risk of heart disease
<b>Sulfur Dioxide</b>	295,382	1	triggers asthma attacks; chronic respiratory and heart diseases; stroke
<b>Particulate Matter</b>	112,608	3	heart attacks, stroke, irregular heartbeat, aggravated asthma, decreased lung function, difficulty breathing
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>	78,854	2	same as above, but worse, gets deep into lungs and into blood stream
<b>Volatile Organic Compounds</b>	22,878	12	eye, nose and throat irritation, headaches, loss of coordination and nausea, liver, kidney and central nervous system damage, cancer
<b>Hydrochloric Acid</b>	18,377	2	irritates eyes, skin, and nose, damages lungs
<b>Lead</b>	46	2	damages nervous system and kidneys, lowers IQ, increases likelihood of antisocial behavior
<b>Mercury</b>	42	1	damage to nervous, digestive, & immune systems, lowers IQ
<b>Nickel</b>	41	2	allergy, cardiovascular and kidney diseases, lung fibrosis, lung and nasal cancer
<b>Cadmium</b>	5	2	kidney disease; lung cancer
<b>Arsenic</b>	4	2	lung, skin, bladder, and liver cancers; irritation of skin and mucous membranes; affects brain and nervous system
<b>Chromium (VI)</b>	4	2	lung cancer, shortness of breath, coughing, and wheezing

Source: see [www.chesterresidents.org/pdf/CovantaAirPollution.pdf](http://www.chesterresidents.org/pdf/CovantaAirPollution.pdf) for this and further context; based on 2016-2019 data from PA Department of Environmental Protection Air Emissions Report: [http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)

# Covanta vs. DELCORA

Who is the bigger air polluter – the Covanta trash incinerator, or the DELCORA sewage sludge incinerator a block away in Chester?

Some claim that Covanta is less of an issue and that people should be more focused on DELCORA. Both are a problem, but there's no question who the larger air polluter is, as the following slides show.

Currently, the issues before us are:

- the county continuing to feed Covanta 31% of their waste stream
- DELCORA's privatization and a planned doubling of the sludge they burn if they start taking the eastern half of the county's sewage



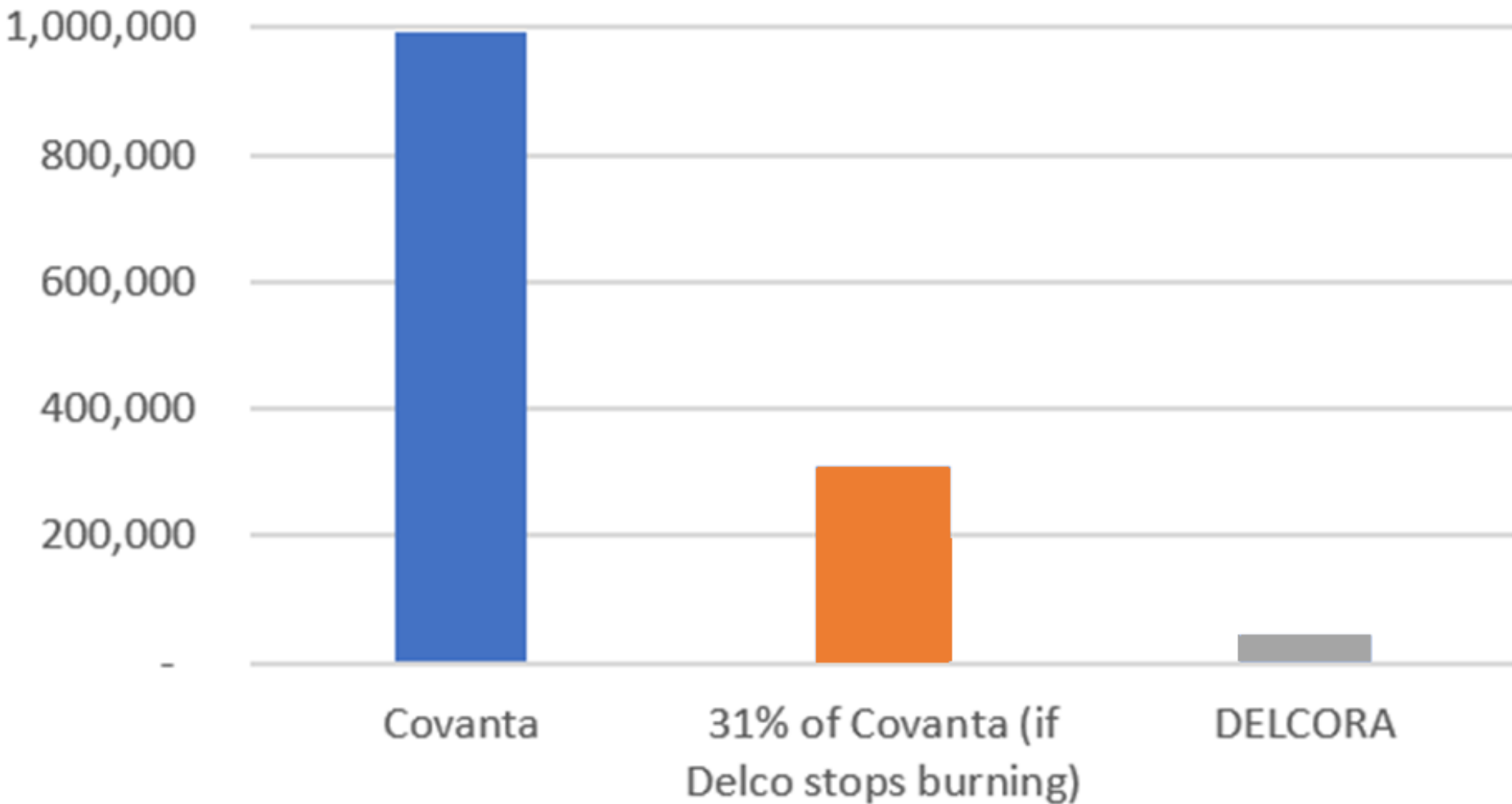
← Covanta



DELCORA →

# Covanta vs. DELCORA

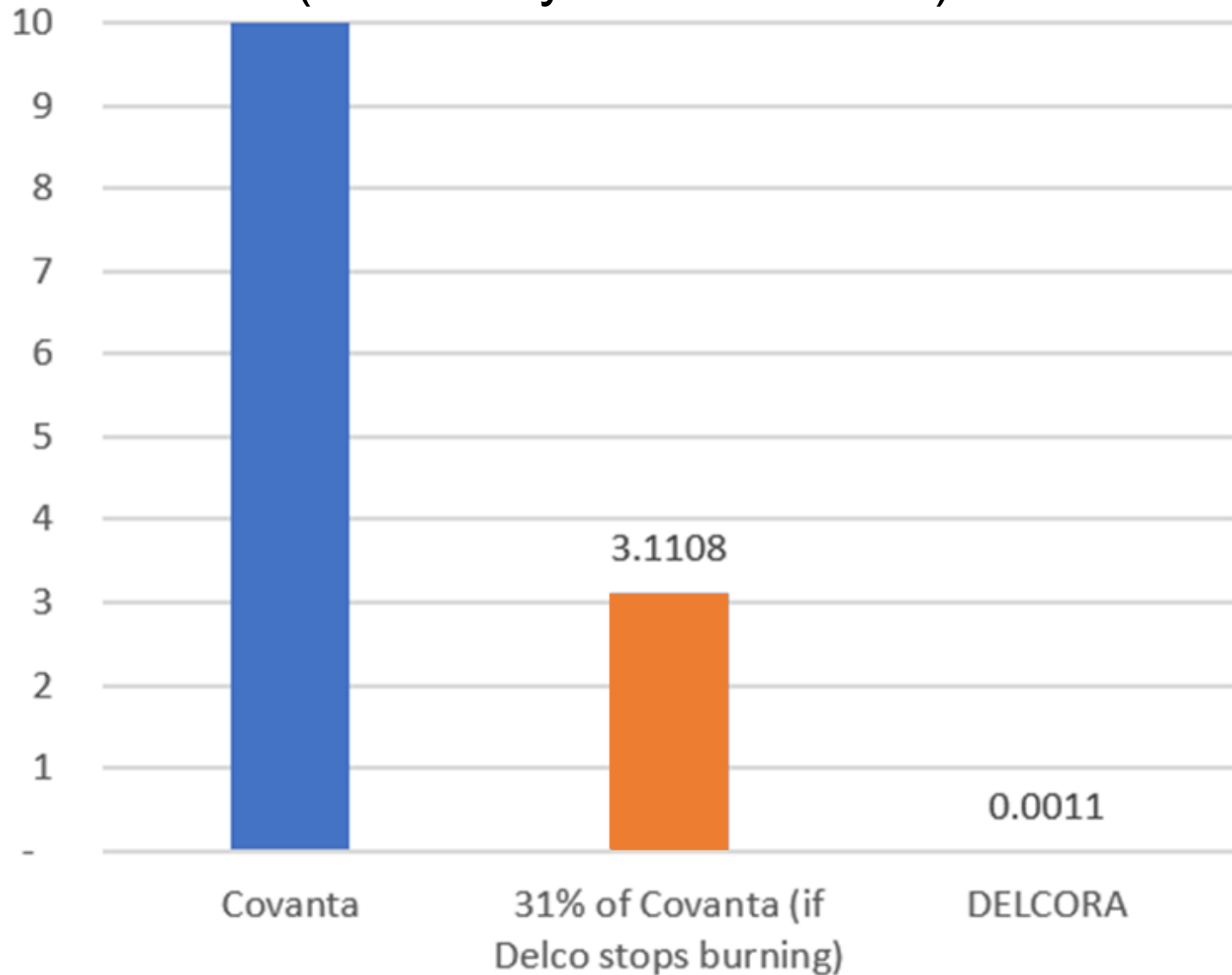
(Greenhouse Gases: tons CO<sub>2</sub> equivalent [20 year impact])



Source: 2019 data from PA Department of Environmental Protection Air Emissions Report:  
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)

# Covanta vs. DELCORA

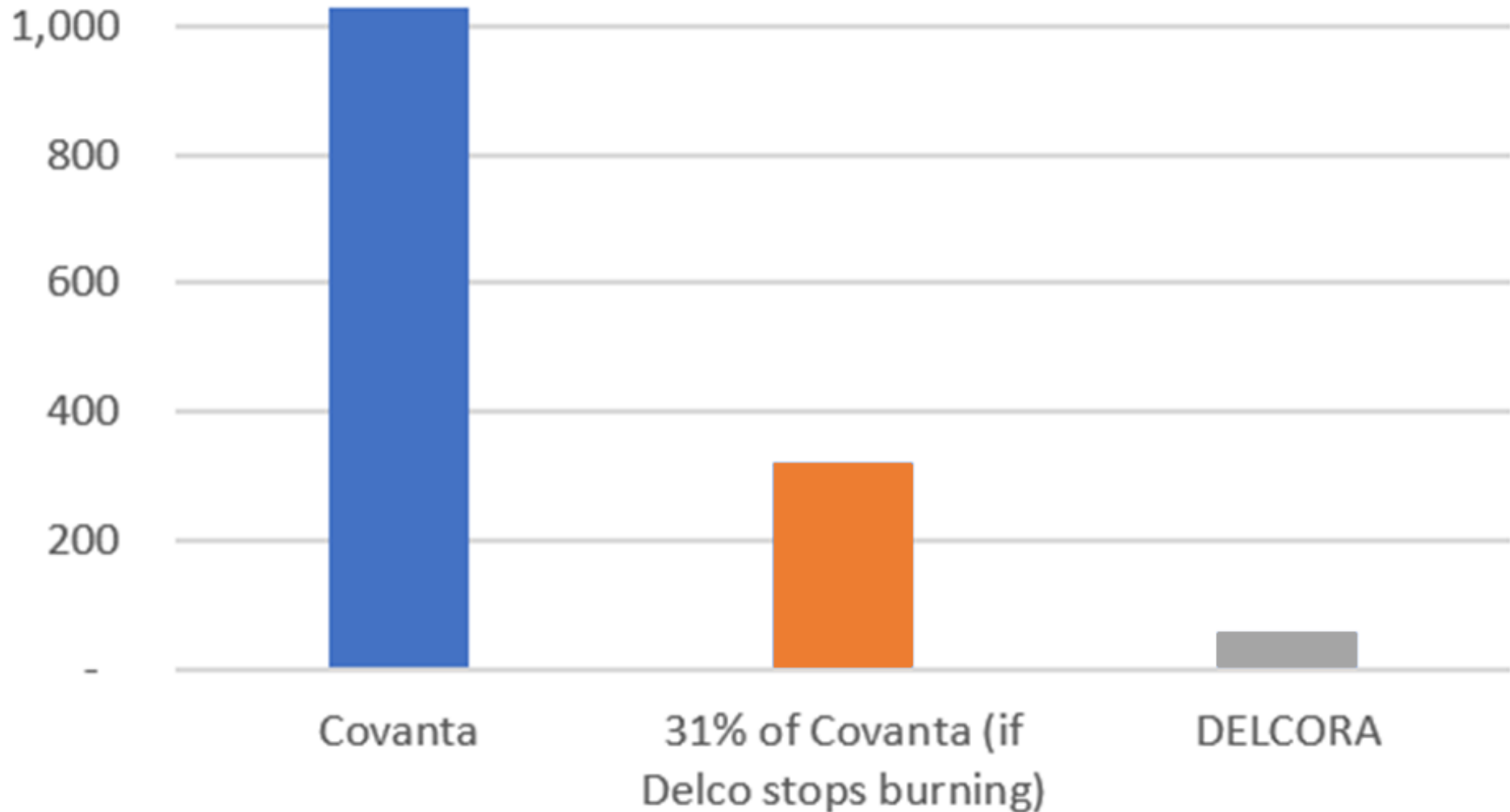
(tons of Hydrochloric Acid)



Source: 2019 data from PA Department of Environmental Protection Air Emissions Report:  
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)

# Covanta vs. DELCORA

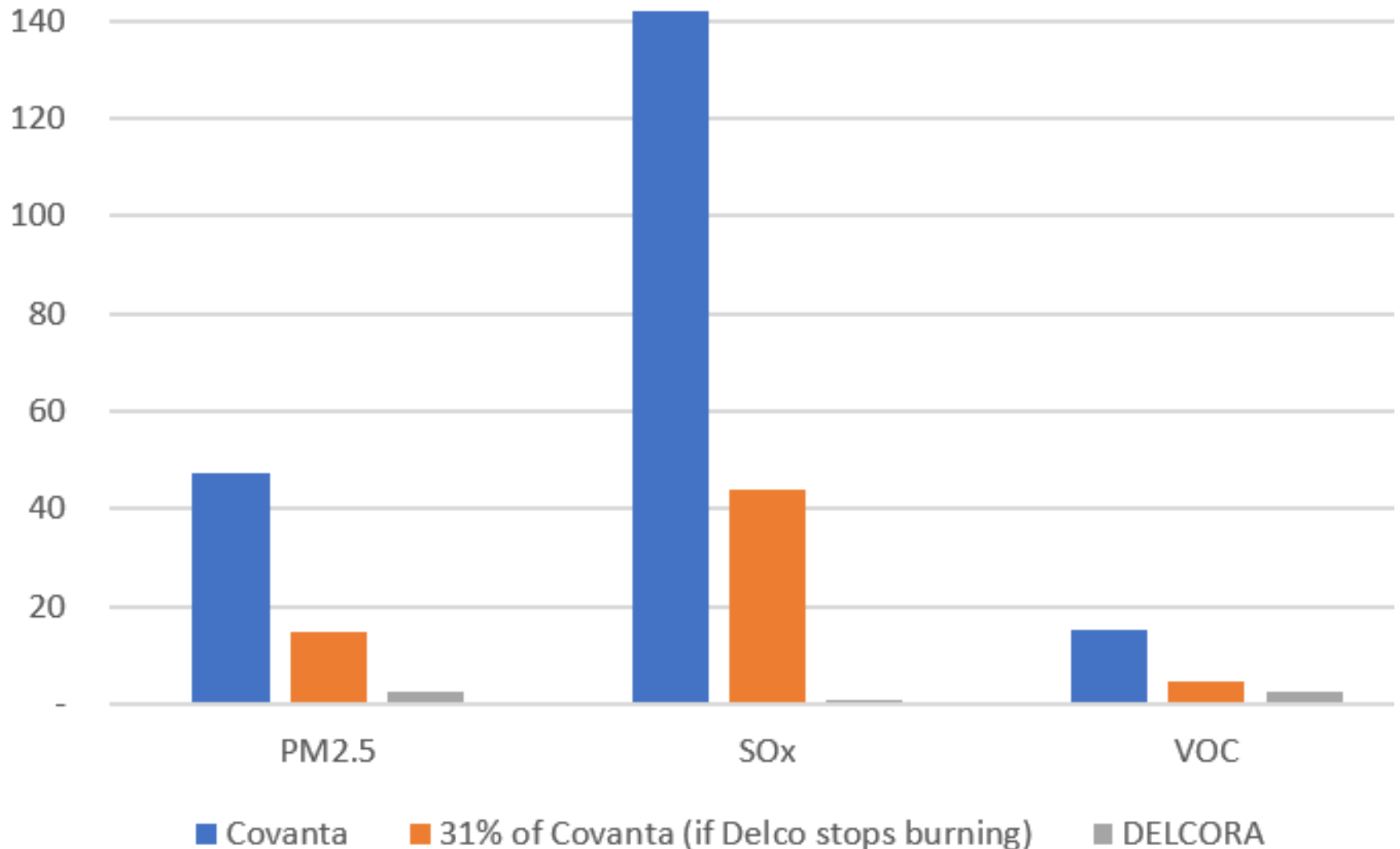
(tons of Nitrogen Oxides, or “NOx”)



Source: 2019 data from PA Department of Environmental Protection Air Emissions Report:  
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)

# Covanta vs. DELCORA

(tons of fine particulate matter, sulfur oxides and volatile organic compounds)

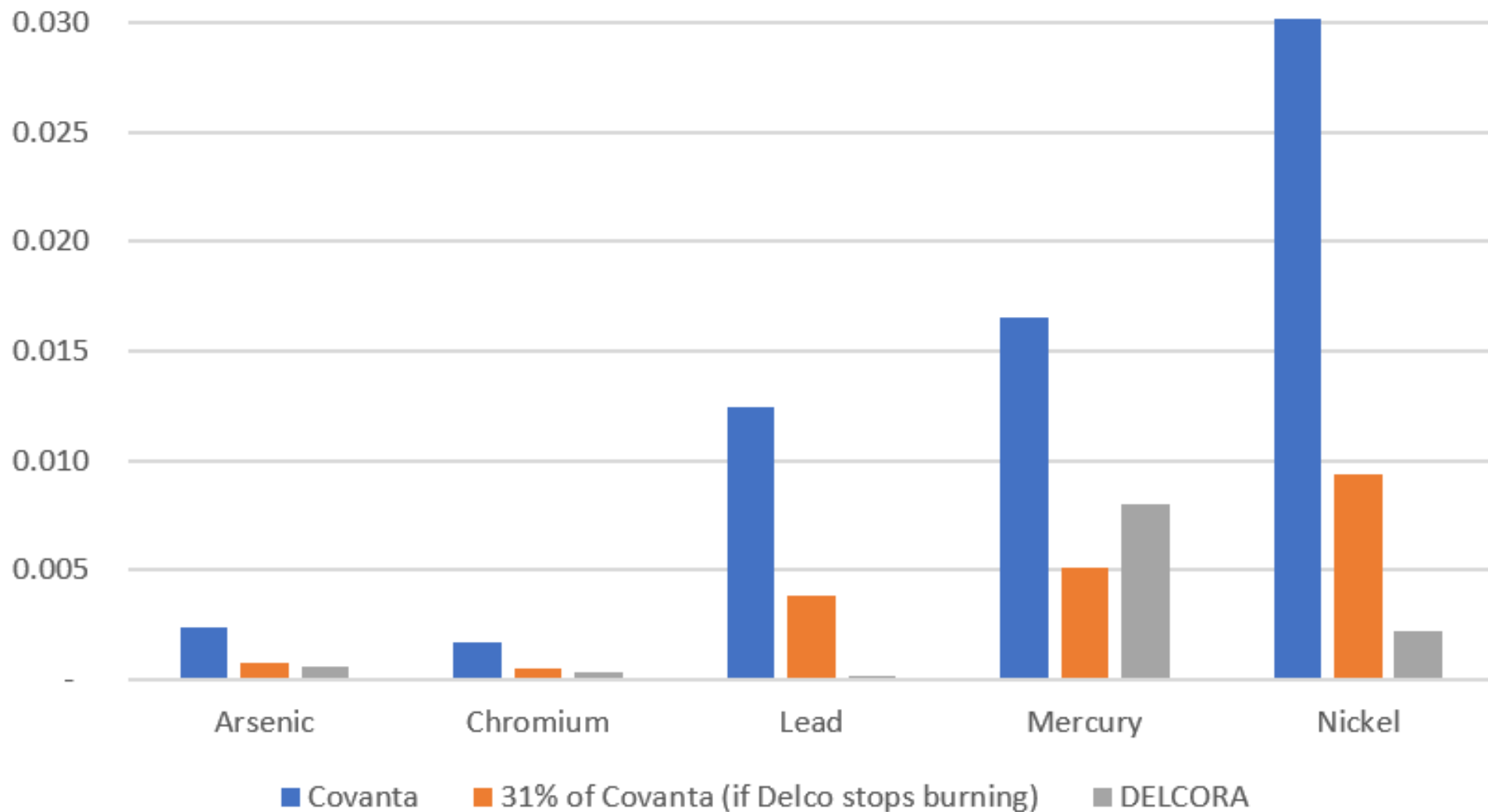


Source: 2019 data from PA Department of Environmental Protection Air Emissions Report:  
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)



# Covanta vs. DELCORA

(tons of toxic metals)



Source: 2019 data from PA Department of Environmental Protection Air Emissions Report:  
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air\\_Emissions\\_Report](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/AQ/PBI/Air_Emissions_Report)

# Debunking Covanta's Emissions Claims

**Covanta's Area Asset Manager,  
Don Cammarata says...**



“99.9+% of what comes out of the stack are normal components of air, including water vapor, nitrogen, oxygen, and CO<sub>2</sub>. The remaining constituents – see table – are well below allowable limits set by State and Federal regulators that have demonstrated protection of human health and the environment”

# **Debunking Covanta's Emissions Claims**

**This new Covanta talking point – that most of their emissions are “normal components of air” is highly misleading, as CO<sub>2</sub> is still a pollutant that causes global warming, and the “small” percentages of emissions that are air pollutants are enough to make them a top air polluter in the city, county, and region.**

**Covanta claims that they are well below permit limits and that permit limits mean health and environmental protection. Well...**

1. Covanta is not always within permit limits. (see violations section next)
2. Covanta's 30-year old incinerator is held to permit limits that are far weaker than limits for modern facilities (which they cannot meet), or compared to limits in some other countries.
3. Permit limits are not based on health and safety, but are technology-based standards for what the facility can meet.

# Debunking Covanta's Emissions Claims

4. Permit limits are concentration-based, so a 500 ton/day incinerator would be permitted to release 7 times less than what Covanta's 3,500 ton/day incinerator in Chester can legally emit.
5. With the exception of four pollutants that are monitored continuously (carbon monoxide, nitrogen oxides, hydrochloric acid, and sulfur dioxide), they only test other pollutants once a year in a self-administered test under ideal operating conditions which underestimate actual emissions – some by 30-50 times or more.
6. Covanta has been known to rig their tests – both continuous monitors and annual stack tests – at other plants to make it seem as if their emissions are lower than they actually are.
7. Emissions of highly toxic mercury, dioxins, and other pollutants are at levels that are quite significant, and there is no safe dose of these and several other pollutants.

# Debunking Covanta's Emissions Claims

8. Covanta has run this incinerator since 2005, but only now is finally *considering* installing one of the two missing pollution control devices – the one to reduce nitrogen oxides that trigger asthma attacks – and would not be using the more expensive equipment required of modern incinerators, but much less effective controls that would have them emitting more than twice what modern standards allow.

They are not talking about installing the missing control device (carbon injection) that reduces air emissions of the most toxic chemicals like dioxins and mercury (by transferring them to the ash).

**Find these counter-arguments to Covanta's emissions claims more thoroughly discussed and annotated in pages 32-42 of this [recent report](#) regarding Covanta in Maryland.**

# State Permit Violations

**Covanta's incinerator in Chester is 2<sup>nd</sup> worst in the state for permit violations. Covanta operates all of the state's six trash incinerators except for the Wheelabrator Falls incinerator in Bucks County.**

Incinerator	County	Air violations since 2010	Air violations since 2017	ALL violations since 2017
<a href="#">Plymouth</a>	Montgomery	59	29	32
<b><a href="#">Chester</a></b>	<b>Delaware</b>	<b>44</b>	<b>22</b>	<b>23</b>
<a href="#">Lancaster</a>	Lancaster	35	16	17
<a href="#">York</a>	York	27	12	12
<a href="#">Falls</a>	Bucks	10	4	7
<a href="#">Harrisburg</a>	Dauphin	9	1	9

NOTE: the numbers above are actually the number of inspections resulting in violations. Many of these represent multiple violations. For example, Covanta's 44 air violations since 2010 are really 166 separate violations – the latest of which are 7 violations issued 5/5/2021.

Source: PA Department of Environmental Protection, Environment Facility Application Compliance Tracking System (eFACTS): <https://www.ahs.dep.pa.gov/eFACTSWeb/>

# Health Impacts

**People living near incinerators have an increased risk of...**

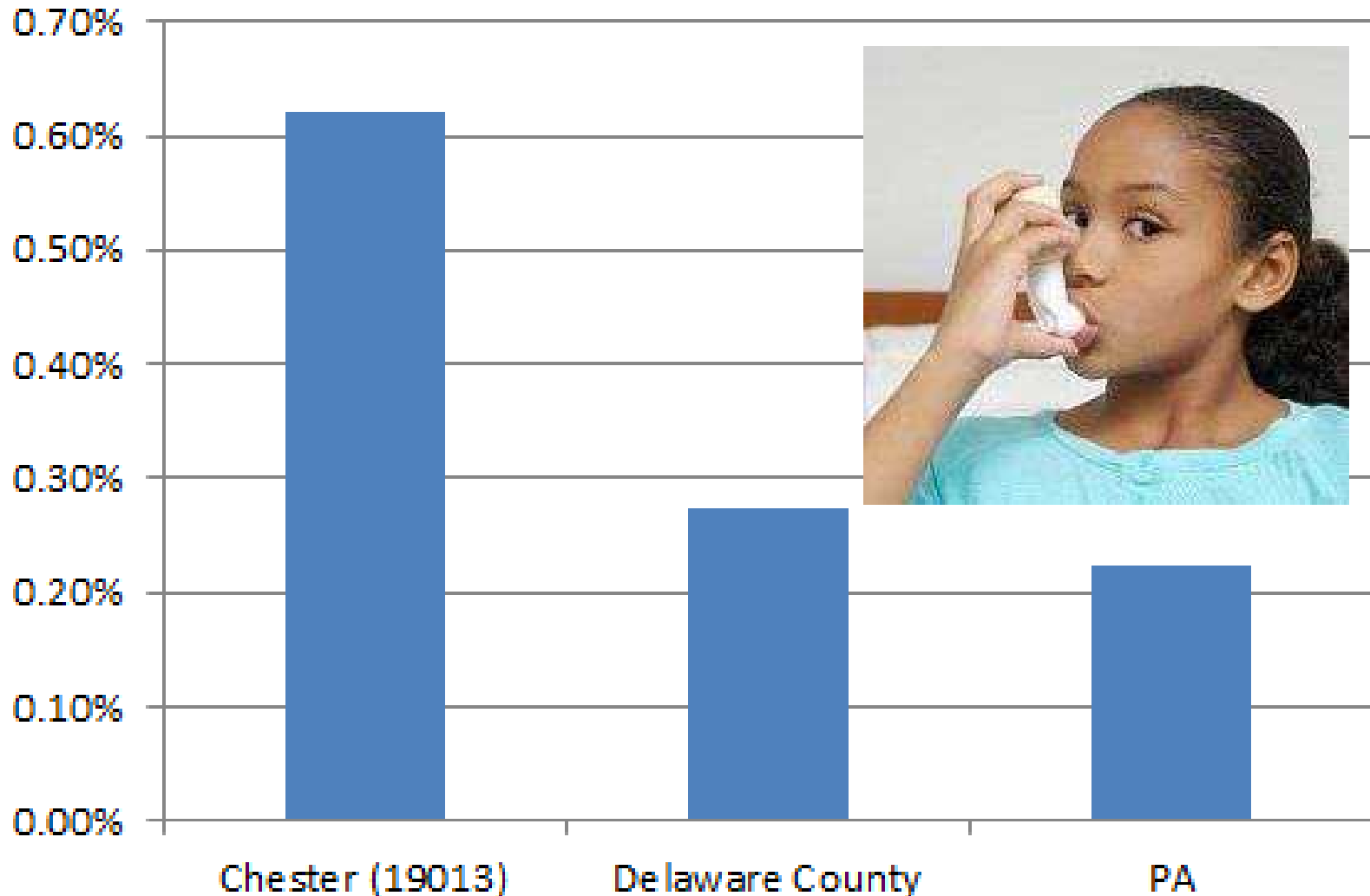
- **All types of cancer, including:**
  - **Stomach**
  - **Colorectal**
  - **Liver**
  - **Renal**
  - **Lung & pleural**
  - **Gallbladder**
  - **Bladder**
  - **Non-Hodgkin lymphoma**
  - **Leukemia**
  - **Soft-tissue sarcoma**
- **Respiratory diseases & symptoms**
- **Cardiovascular diseases**
- **Urinary diseases**

Covanta [claims](#) that health studies of communities around trash incinerators show nothing to worry about. However, they cherry pick the studies that didn't find any connection, and it can be hard to find such connections in studies when pollutants and people move, among other factors. For references to the studies that *do* find a connection to the listed health impacts, see this [factsheet on incinerator health studies](#).



# Childhood asthma hospitalization 3x PA rate

Data for those under 18 years of age, for 2010



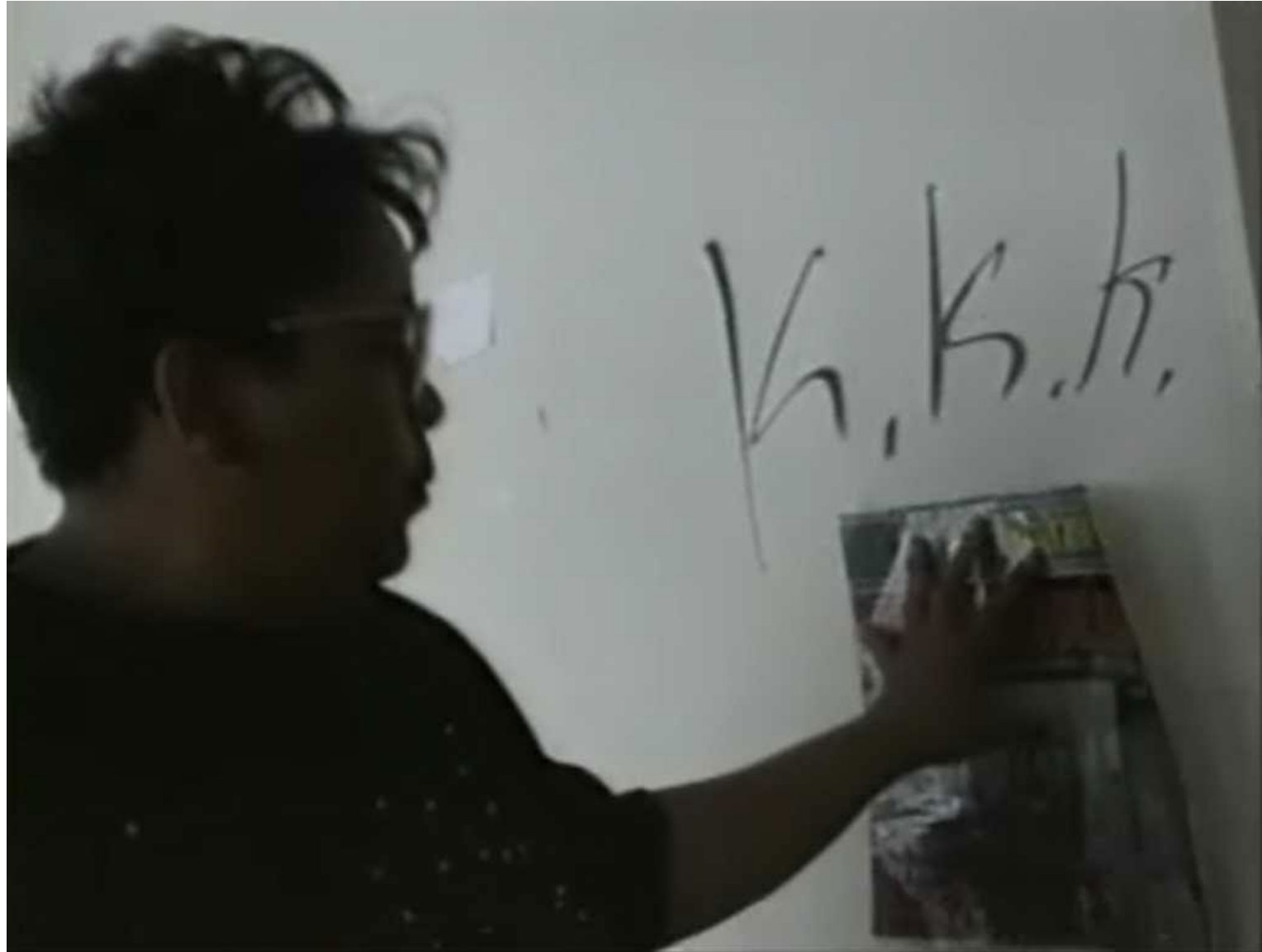
Source: Analysis based on 2010 Census data and asthma data from The Asthma Program, PA Department of Health.  
Data provided by Pennsylvania Health Care Cost Containment Council (PHC4).

# What is Environmental Justice?

- Environmental Justice is the movement's response to environmental racism
- Environmental racism is the disproportionate impact on people of color by noxious industries such as incinerators, as well as the lack of environmental amenities in communities of color.
- Multiple experts in the field have described Chester as the worst case of environmental racism they've ever seen.

[www.ejnet.org/ej/](http://www.ejnet.org/ej/)

# Racism isn't usually this obvious...



Zulene Mayfield shows signs of vandalism at office of Chester Residents Concerned for Quality Living in Chester, PA in [1996 "Laid to Waste" documentary](#).

# Demographics around Covanta & DCSWA Rolling Hills Landfill

Facility	People living within 2.5 miles		
	Population	Household Income	Demographics
DCSWA's Rolling Hills Landfill	2,283	\$73K	96.8% White
Covanta Delaware Valley incinerator	23,000	\$30K	63.8% Black

Census data from [JusticeMap.org](https://www.justicemap.org/)



← Covanta Delaware Valley trash incinerator

DCSWA Rolling Hills Landfill →

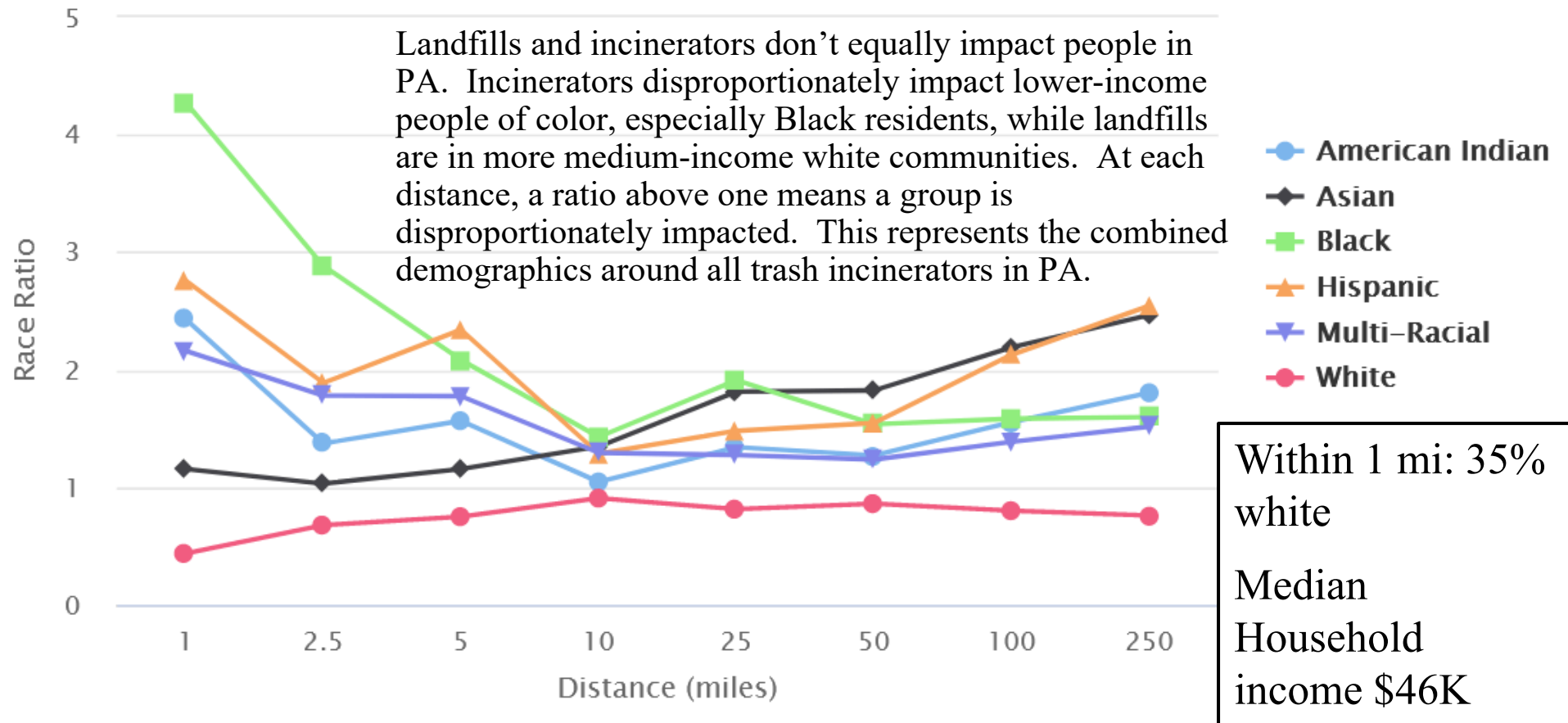


# Trash Incinerators in PA

Operating Trash Incinerator : Ratio of Percent Race to PA Mean vs Distance



Powered by: JusticeMap.org, Census Data, and Energy Justice



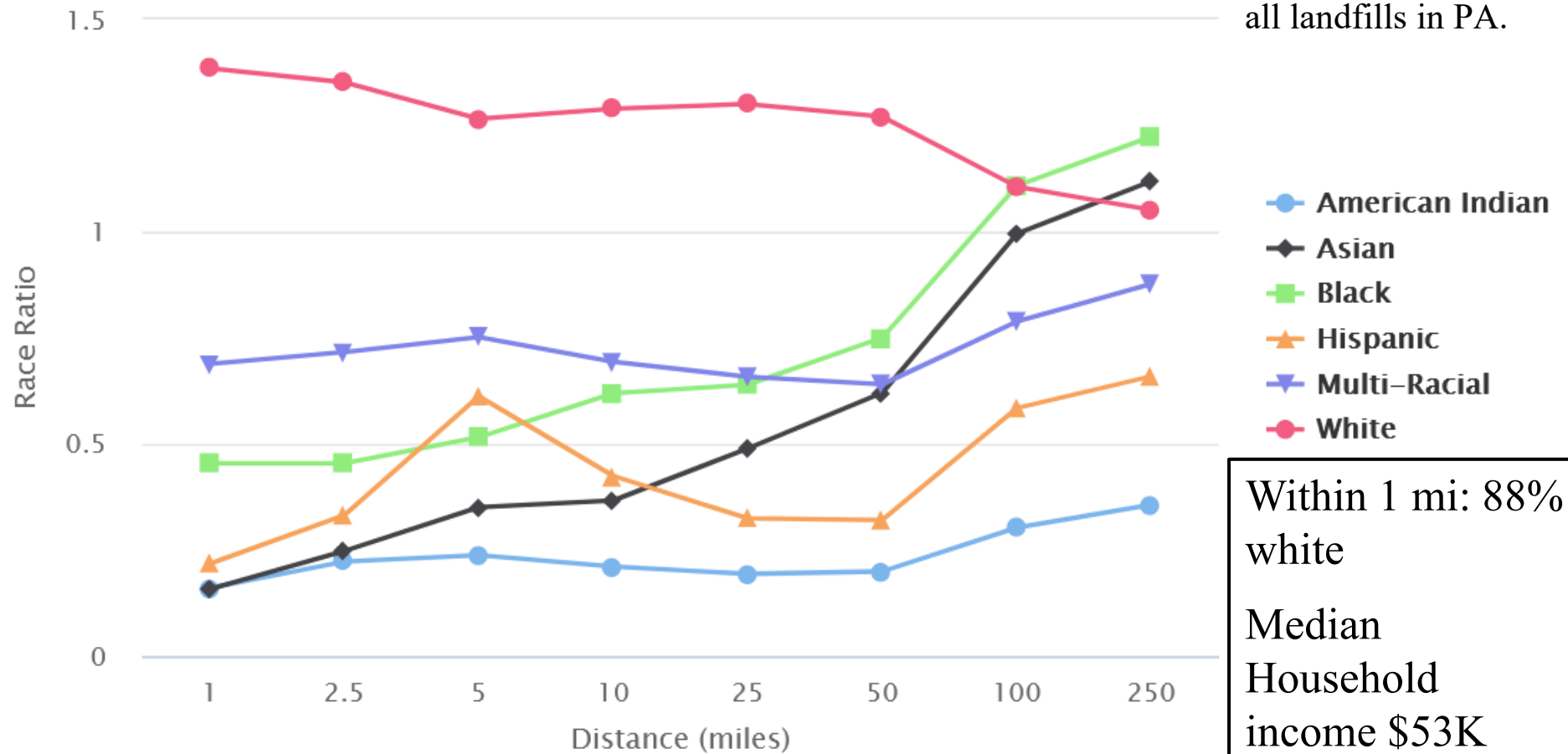
<http://www.spatialjusticetest.org/test/2044.html>

# Landfills in PA

## Ratio of Percent Race to US Mean vs Distance

Powered by: JusticeMap.org, Census Data, and Energy Justice

This represents the combined demographics around all landfills in PA.



<http://www.spatialjusticetest.org/test/2043.html>



# Is incineration a problem in general?



[www.EnergyJustice.net/incineration/](http://www.EnergyJustice.net/incineration/) ← find a ton more info here!



# Incinerator Life Spans

- Average lifespan of the 44 trash incinerators that have closed from 2000 through 2020 was just **23 years**.
- Few trash incinerators operate beyond a 30-40 year life time. Covanta Delaware Valley is 30 years old in 2021.
- Only four have made it past 40 years of age without being completely rebuilt, and much younger incinerators have been showing serious signs of aging
  - Rebuilding the Harrisburg, PA incinerator when it was 30 (first opened in 1972) bankrupted the city in 2011 as we warned them in 2003.

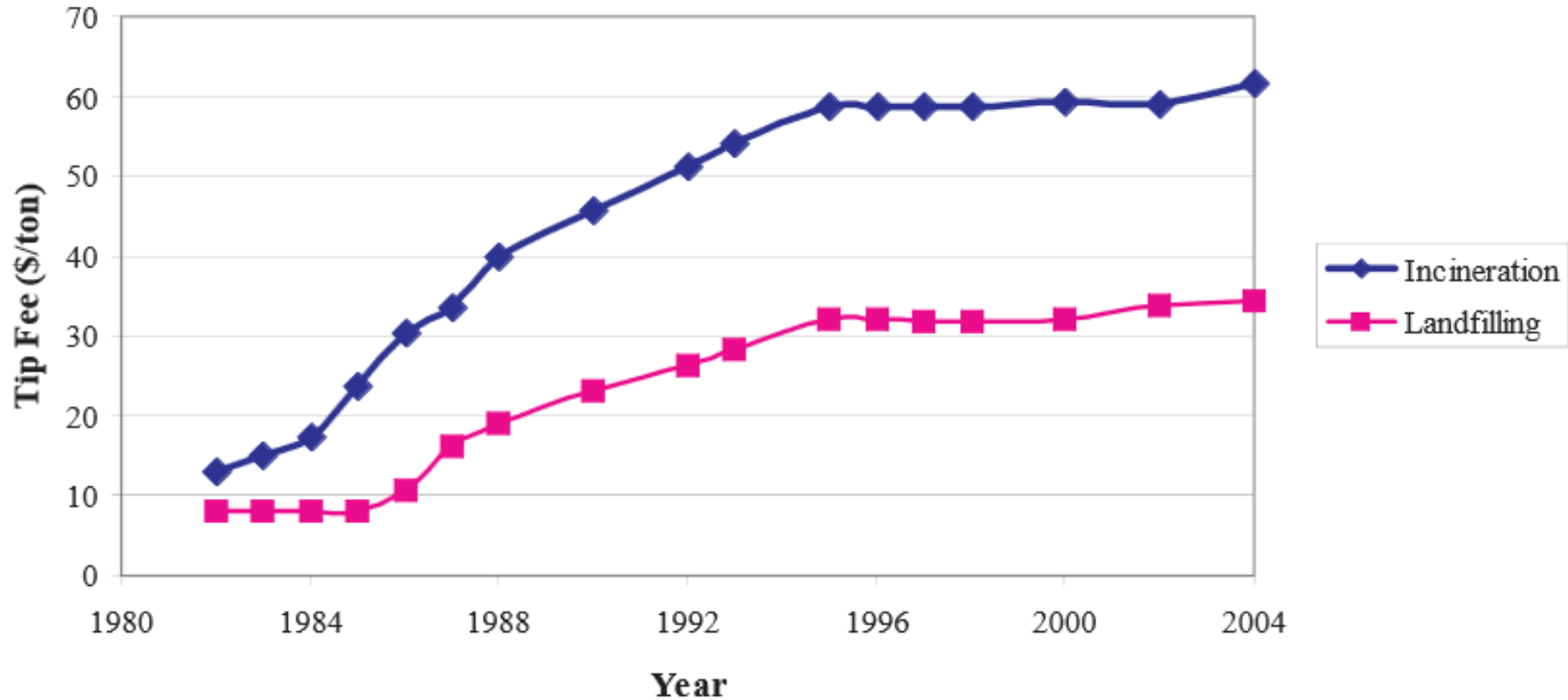


# **Incineration: the most expensive and polluting way to manage waste or to make energy**

- Trash incineration is more expensive than landfilling
  - It's only competitive in Delco because...
    - The county subsidizes them with discounted ash dumping
    - The incinerator is the largest in the U.S. (economy of scale)
    - The incinerator lacks half of the pollution control systems most incinerators have, which are the most expensive part of plant operations
- Trash incineration is more expensive than other power generation, even though they get paid to take their “fuel”
- Trash incineration is more polluting than coal burning
- Trash incineration (and landfilling incinerator ash) is more polluting than directly landfilling waste

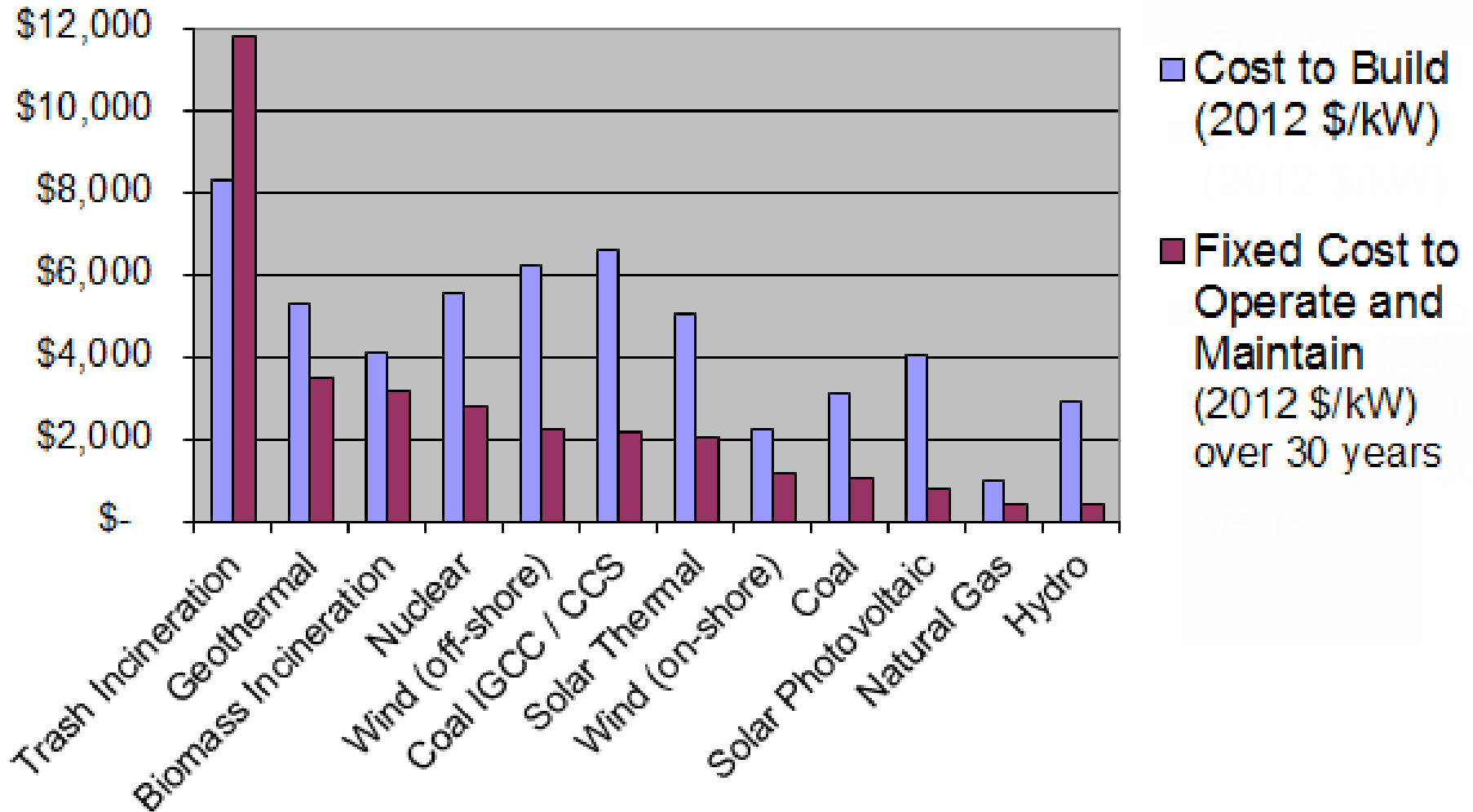
# Most Expensive Way to Manage Waste

Figure 3. Landfill and Incinerator Tip Fees



Source: National Solid Waste Management Association 2005 Tip Fee Survey, p4.  
[www.environmentalistseveryday.org/docs/Tipping-Fee-Bulletin-2005.pdf](http://www.environmentalistseveryday.org/docs/Tipping-Fee-Bulletin-2005.pdf)

# Most Expensive Way to Make Energy

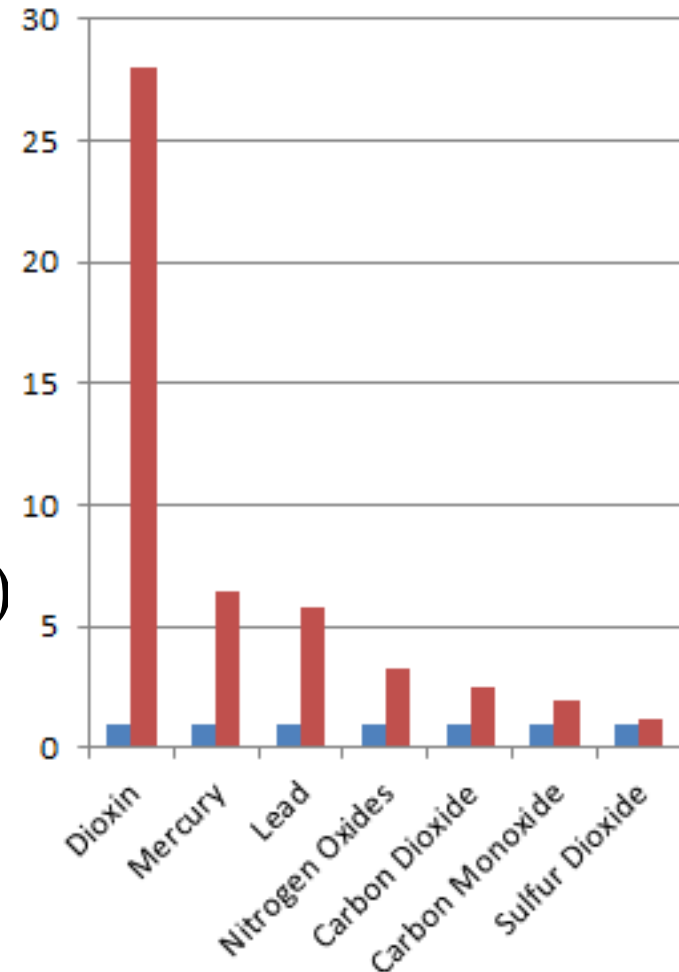


Source: "Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants," Energy Information Administration, April 2013, p.6, Table 1. Full report here: [www.eia.gov/forecasts/capitalcost/pdf/updated\\_capcost.pdf](http://www.eia.gov/forecasts/capitalcost/pdf/updated_capcost.pdf)

# Incineration Worse than Coal

## Toxic Air Emissions are...

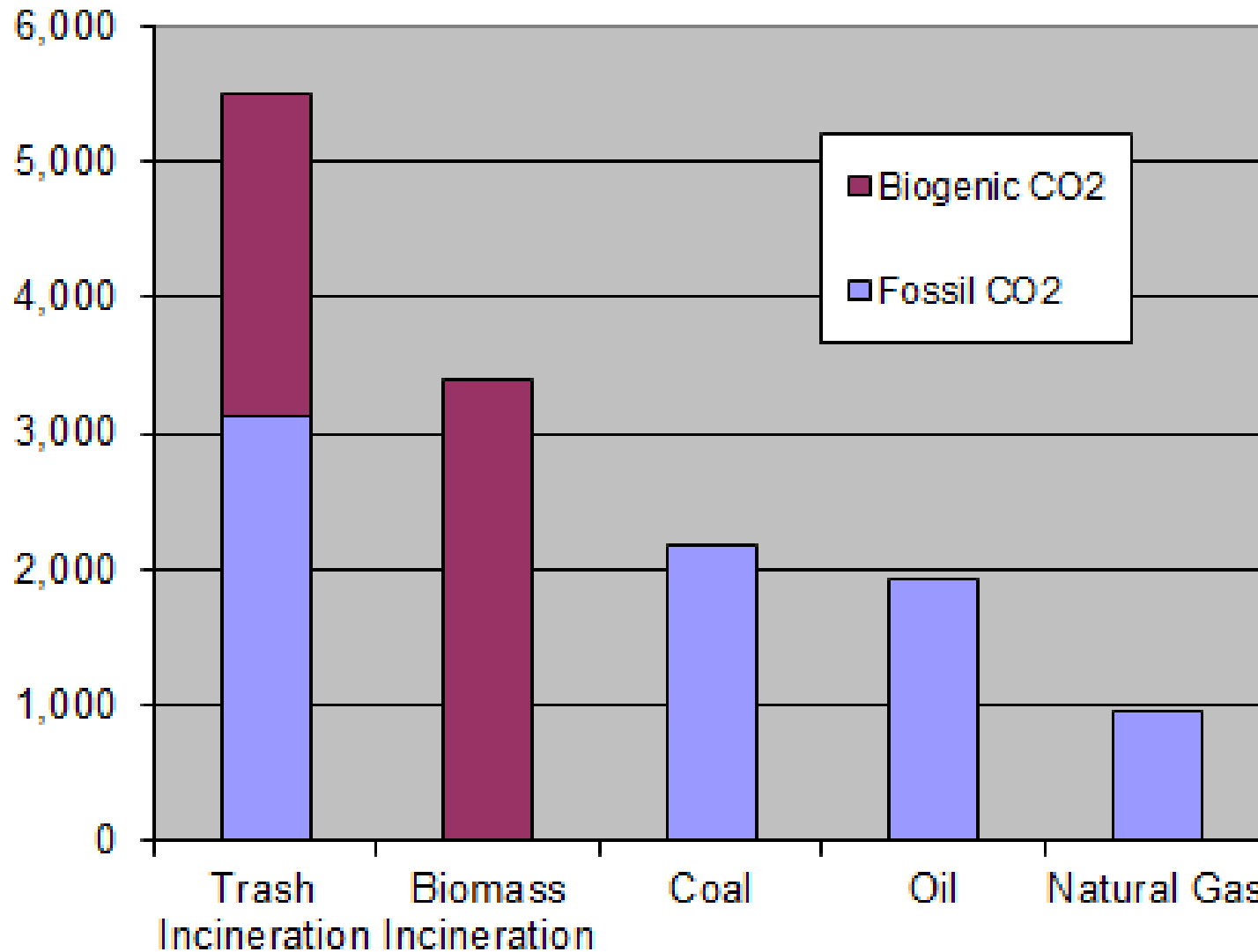
- **Dioxins / furans** (28 times)
- **Mercury** (6-14 times)
- **Lead** (6 times)
- **Nitrogen Oxides (NO<sub>x</sub>)** (3.2 times)
- **Carbon Monoxide (CO)** (1.9 times)
- **Sulfur Dioxide (SO<sub>2</sub>)** (70% worse)
- **Carbon Dioxide (CO<sub>2</sub>)** (2.5 times)



# Global Warming Pollution

## Smokestack CO2 Emissions from U.S. Power Plants

**CO2 (lbs/MWh)**



Data is in pounds of CO2 per unit of energy produced (lbs/MWh)

Source: U.S. EPA  
Emissions &  
Generation  
Resource Integrated  
Database (eGRID)  
v.9, released  
2/24/2014  
(2010 data)

# Incineration Worse than Landfills

- Incinerators still require landfills for their toxic ash
- Choice is NOT landfill vs. incinerator, but:

**landfill**

**VS.**

**incinerator AND a smaller, more toxic landfill**

**OR...**

**Zero Waste and minimal landfilling**



# Incineration Worse than Landfills

- Incinerators still require landfills for their toxic ash
- 30 tons of ash produced for every 100 tons burned
- In terms of leachate, think of coffee beans vs. coffee grounds. Pour water over beans and you won't get coffee, but grind them up and increase their surface area, pour water over them, and you get coffee. Ash is similar in that its higher surface area means more toxic chemicals can leach out, polluting groundwater.



# Landfilling vs. Incineration

Air emissions data from all landfills and incinerators in southeastern and southcentral PA, handling the same amount of waste. **Incinerators emit 80% more greenhouse gases and 60% more health damaging air pollution.**

Pollutant (all data in tons)	Incinerators	Landfills	Incinerators are __ times as polluting
<u>Greenhouse Gases (CO<sub>2</sub>e)</u>	482,770	268,763	<u>1.8</u>
<u>Health Damaging Pollution</u>	1,975	1,236	<u>1.6</u>
Carbon Monoxide (CO)	119	22	5
Hydrochloric Acid (HCl)	17	1	21
Nitrogen Oxides (NOx)	625	6	105
Particulate Matter (Condensable)	25	1	17
Particulate Matter (PM10)	26	17	1.6
Fine Particulate Matter (PM2.5)	17	4	5
Sulfur Oxides (SOx)	55	3	19
Total Suspended Particulate	2,178	2,486	0.88
Volatile Organic Compounds	3	9	0.34

Source: PA Dept of Environmental Protection [Air Emissions Report](#), 2017 data for southeast & southcentral region facilities

# **Landfilling vs. Incineration: what does a Life Cycle Analysis show?**

Using the most comprehensive life cycle analysis software to compare a Covanta incinerator in Maryland to landfill options in PA, VA, & OH found that...

## **Incineration is worse for:**

- Global warming
- Toxic emissions
- Particulate Matter emissions
- Acid rain
- Smog

## **Economic and demographic analyses show that incineration is also worse in terms of:**

- Cost
- Number of people impacted
- Environmental racism
- Jobs

## **Landfills are worse for:**

- Ozone depletion

Depending on landfill gas burning method, some landfills are worse for :

- Carcinogenic emissions
- Eutrophication
- Eco-toxic chemicals

Source: Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland (Chap. 4)  
<http://www.energyjustice.net/md/beyond.pdf>

# Incineration worse than Landfills

## Impact per ton of waste transported and incinerated or landfilled

<u>Impact</u>	<u>Measure</u> (lbs of equivalent emission, below, per ton of waste)	<u>Incineration</u> (MCRRF) (lbs/ton of waste)	<u>Landfilling</u> (range of 10 landfills) (lbs/ton of waste)	<u>Which is worse?</u>	Largest impact → smallest impact
<b>Global warming</b>	Carbon dioxide (CO <sub>2</sub> )	2,023.89	779 – 1,220	Incineration	
<b>Human health (toxic chemicals)</b>	Toluene	219.80	0.89 – 4.10	Incineration	
<b>Smog formation (asthma)</b>	Ozone (O <sub>3</sub> ) [NO <sub>x</sub> & VOCs]	38.64	2.43 – 15.51	Incineration	
<b>Acidification (acid rain, respiratory)</b>	Sulfur dioxide (SO <sub>2</sub> )	2.38	0.08 – 1.28	Incineration	
<b>Human health (carcinogens)</b>	Benzene	0.46	0.005 – 1.119	* (Depends)	
<b>Human health (respiratory/heart)</b>	Fine particulate matter (PM <sub>2.5</sub> )	0.23	0.001 – 0.012	Incineration	
<b>Eutrophication (algae blooms)</b>	Nitrogen	0.07	0.036 – 0.159	* (Depends)	
<b>Ozone depletion</b>	CFC-11	0	0.001 – 0.004	Landfilling	
<b>Eco-toxicity</b>	2,4-D herbicide	0.00088	0.00002 – 0.00128	* (Depends)	
<b>Monetized summary</b>	U.S. Dollars	<b>\$258.58</b>	<b>\$52.37 – \$102.97</b>	Incineration	

Note: each measure includes weighted values of related pollutants. For example, global warming impacts include methane and nitrous oxide (N<sub>2</sub>O) emissions, and toxic chemical impacts include mercury emissions. Impacts are weighted over a 20-year time frame. Landfill options assume a gas capture rate of 75%.

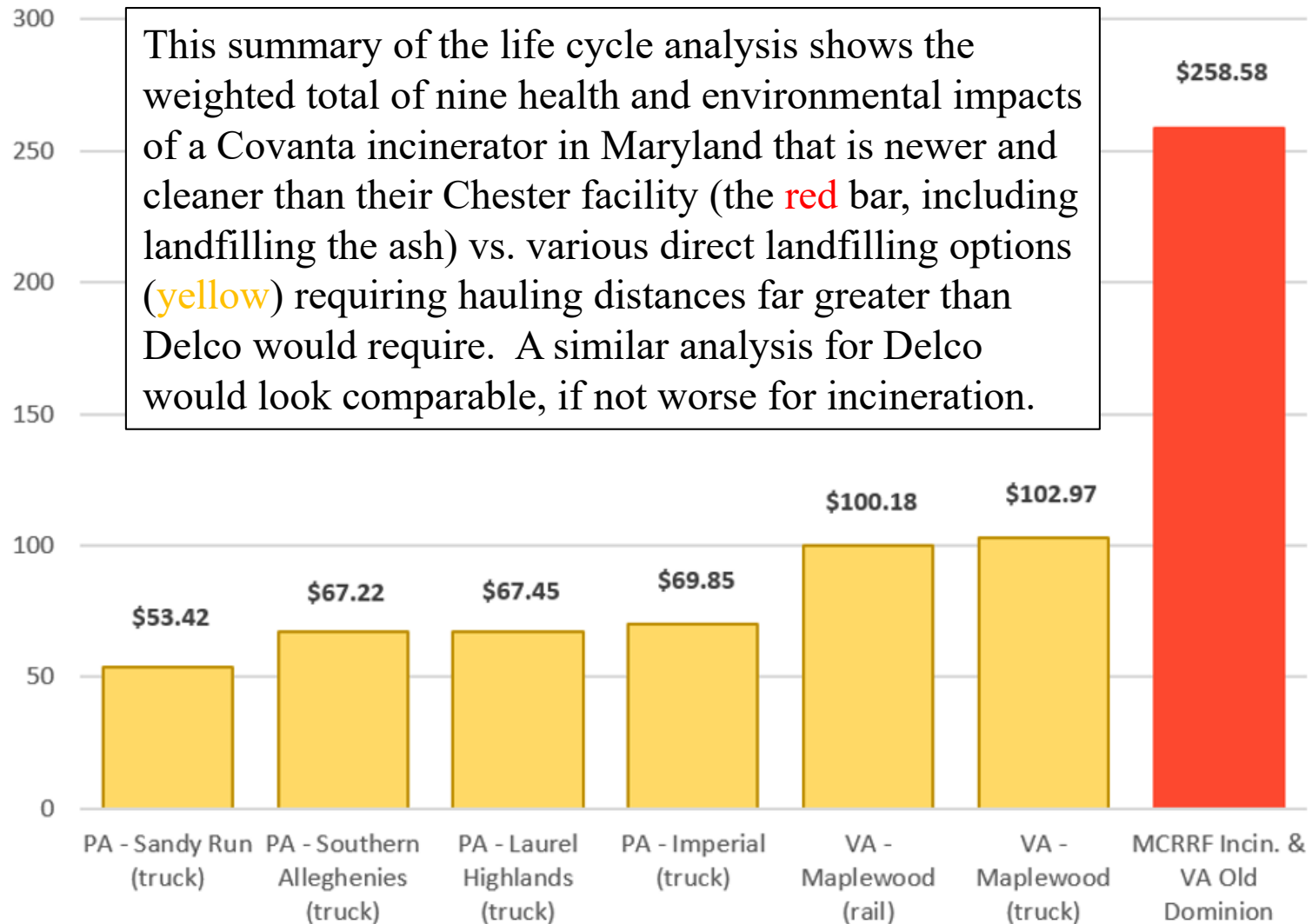
\* Carcinogenicity, eutrophication, and eco-toxicity are worse from incineration compared to a landfill that flares its gas, but are worse from landfilling if landfill gas is burned for energy in an internal combustion engine.

Analysis conducted with the [Monetizing Environmental Benefits Calculator \(MEBCalc\)](#) life cycle assessment software.

Source: Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland (Chap. 4)  
<http://www.energyjustice.net/md/beyond.pdf>

# Monetized Environmental Impact

(\$ health/environmental impact per ton of waste disposed)

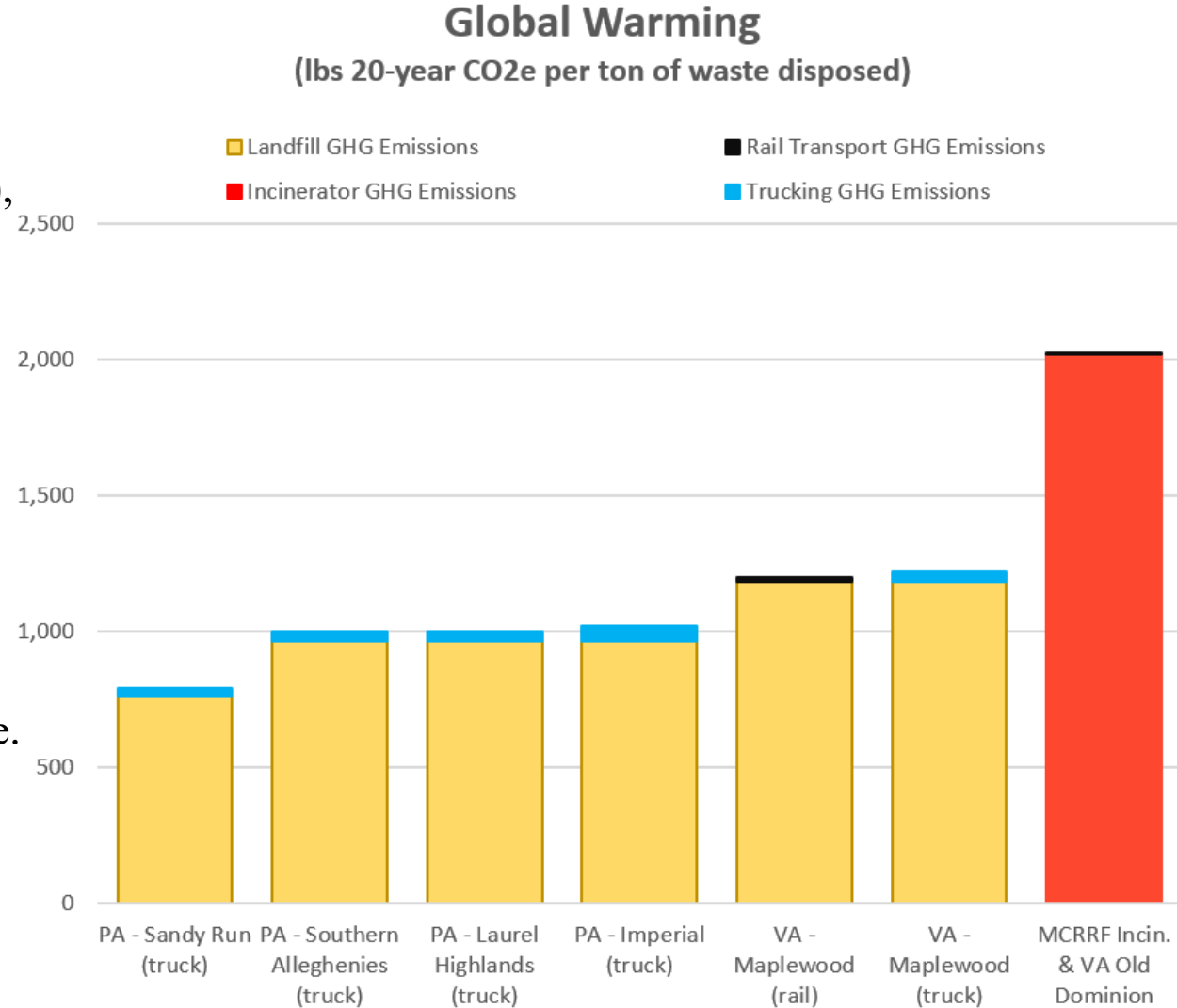


Analysis conducted with the [Monetizing Environmental Benefits Calculator \(MEBCalc\)](#) life cycle assessment software.

Source: Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland (Chap. 4) <http://www.energyjustice.net/md/beyond.pdf>

# Incineration worse than Landfills for Climate; Trucking not an Issue

Of the nine impacts evaluated, global warming has the greatest health and environmental cost. Incineration (and landfilling ash), in **red**, has impacts far greater than direct landfilling (**yellow**), even when having to use many more diesel trucks and hauling hundreds of miles away to landfill (far more than Delco would need to). Transportation accounted for about 3% of total impacts, and cannot come close to making incineration preferable. For a deeper discussion of landfills vs. incinerators on climate, see Chapter 3 in the [Beyond Incineration report](#).



Analysis conducted with the [Monetizing Environmental Benefits Calculator \(MEBCalc\)](#) life cycle assessment software.

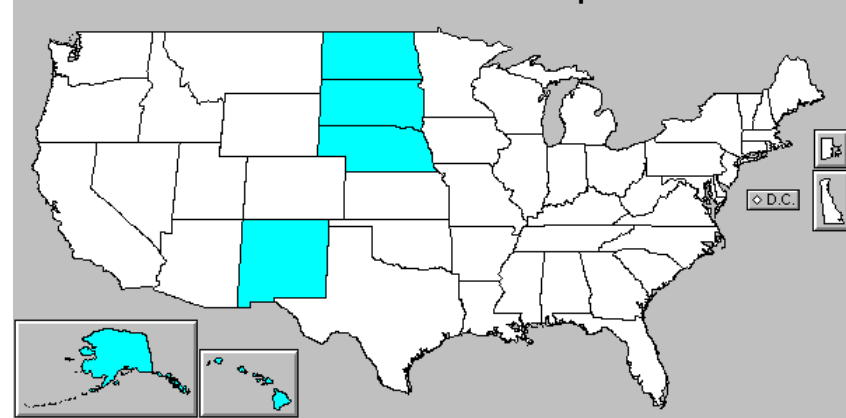
Source: Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland (pp. 56-7)  
<http://www.energyjustice.net/md/beyond.pdf>



# Where would our waste go if we don't burn it in Chester?

- Pennsylvania has a problem with TOO MUCH landfill space, making the state a magnet for dumping.
- Pennsylvania has been the nation's #1 importer of trash since it was first studied in the early 1990s, accepting trash from 44 states, DC, Puerto Rico, the Virgin Islands, Bermuda, and Canada.
- Pennsylvania has 43 landfills and six trash incinerators.
- DCSWA owns a landfill in Berks County, where three more private landfills also operate.

States that have NOT dumped on PA:



Sources: PA Department of Environmental Protection, Municipal Waste Landfills and Resource Recovery Facilities:

<https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/MunicipalWaste/MunicipalWastePermitting/Pages/MW-Landfills-and-Resource-Recovery-Facilities.aspx>; Solid waste disposal information database:

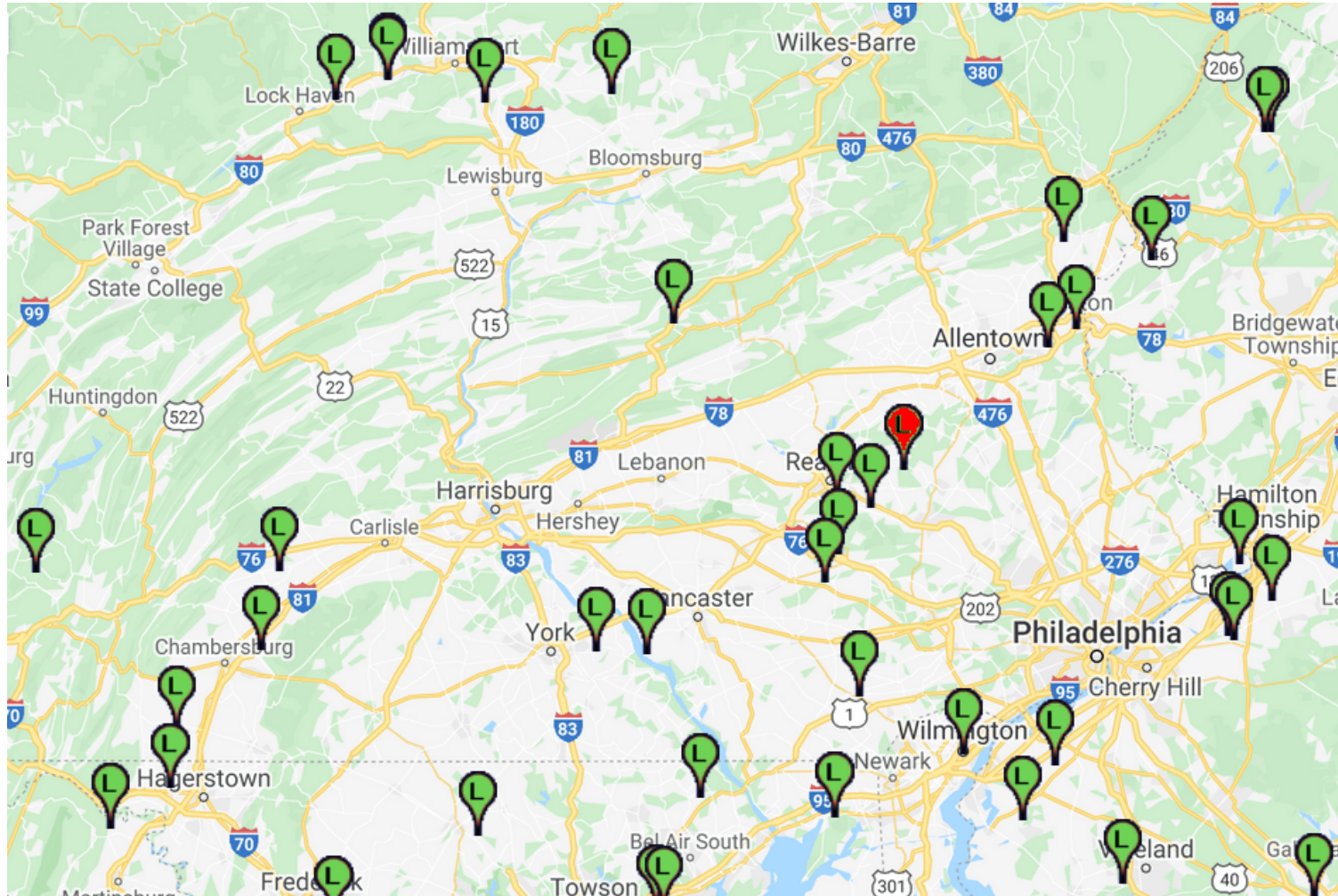
[http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid\\_Waste\\_Disposal\\_Information](http://cedatareporting.pa.gov/reports/powerbi/Public/DEP/WM/PBI/Solid_Waste_Disposal_Information)

Congressional Research Service reports on interstate shipment of municipal waste are available at <http://www.actionpa.org/waste/>



# Landfills in our Region

Once the Delaware County Solid Waste Authority's Rolling Hills Landfill (in red) runs out of space, there is no shortage of nearby landfills that could be used.



Sources: Energy Justice Communities Map : <http://www.energyjustice.net/map/jtiny=4782>  
PA Department of Environmental Protection, Municipal Waste Landfills and Resource Recovery Facilities:  
<https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/MunicipalWaste/MunicipalWastePermitting/Pages/MW-Landfills-and-Resource-Recovery-Facilities.aspx>

# Is there time to switch away from incineration so quickly?

The county has its own landfill, and plenty of others are available. At the end of the current contract with Covanta (4/30/2022), DCSWA could use private waste haulers to bring trash from their two transfer stations to any assortment of landfills rather than to Covanta. DCSWA already has relationships with private waste haulers who have the means.

**DCSWA should issue a request for proposals (RFP) for long-term hauling to landfills (its own, then others) to find favorable pricing.**



Other communities such as Detroit, MI, Hartford, CT, and Lorton, VA (pictured above) have large incinerators that abruptly and unexpectedly closed in recent years, and alternative arrangements were made to use landfills. Delco has much more time.

# **If Delco stops sending trash to the incinerator, won't Covanta just replace it with other people's trash?**

- In 2020, Delaware County waste was 31% of the waste Covanta burned. **If Delco pulls out, there is no comparable jurisdiction with 380,000 tons/year of waste seeking a home.**
  - New York: already in a 20-30 year Covanta contract; unlikely to increase incineration
  - Philadelphia: already in a 4-7 year Covanta contract; if anything changes, it'll be to stop incinerating, not increase it; incineration was removed from their Zero Waste goal
  - Baltimore: just signed a new 10-year contract with their own incinerator; new administration trying to move away from incineration toward Zero Waste
  - Washington, DC: uses another Covanta incinerator and just shortened their contract with Covanta to study alternatives to burning
- It's unlikely that Covanta will easily fill that gap with waste from elsewhere. If Philadelphia pulls out their 31% when their contract is up next, that's nearly 2/3rds of their waste supply gone, and not easily replaced.
- In 2014, Covanta burned 158,893 tons less than they did in 2017. They managed to fill a big gap with New York City trash, but burned at much lower levels for several years until landing that contract. **Without a new source of waste over twice as large as that gap, Covanta will not easily replace Delco trash. They will have to burn less, which is the quickest path to reducing Covanta's pollution.**



# Will ending the county's contract shut Covanta down?

- No one has made this claim. Some DCSWA board members have misrepresented advocates' statements by stating that this is the claim, but it's a straw man argument.
- A broad range of Delco residents and organizations in solidarity with Chester Residents Concerned for Quality Living (CRCQL, or "circle") share the goal of closing Covanta, but are not claiming that losing 31% of their waste stream is sufficient to close Covanta. It might, however, lead to their curtailing the use of 1-2 of their six burners.
- Ending Delco's use of incineration could have immediate public health and environmental benefits, however, reducing air pollution more quickly than any effort to install missing pollution controls.
- Ending Delco's use of incineration will also help inspire other jurisdictions to do the same, and could be a first step toward closing the incinerator.



## **Isn't it better to contract with Covanta and force them to install state-of-the-art pollution controls?**

- New controls would take several years to design, permit and install and would be a prohibitively costly investment for a 30-year old plant. Even with modern pollution controls, they'd still be a leading air polluter in the county.**
- In Camden, NJ, where Covanta owns an incinerator that is the largest air polluter in Camden County, they have proposed to install the baghouse filter system they never had to capture particulate matter. They've stated that this will take about three years to install once they obtain the needed state permits – one year for each of three boiler systems, as they close just one unit at a time.
- In Chester, Covanta has six kilns that burn waste, and they need to design a novel system to work with their unusual type of burner. It could take a few years just to design and permit, and perhaps six more years to install, at which point the plant is so close to the end of its life that it makes little sense to make this investment.
- They cannot afford to come up to modern standards, which could cost on the order of \$200 million or more. Requiring this in a contract means that a new contract would have to be long-term and guarantee a minimum amount of revenue to Covanta to make it worthwhile for them. It's not worth the dedication to that much waste and pollution when greater cuts in pollution can come right away from feeding them less waste.

# What would it cost to stop incinerating?

**Bottom line... worst case scenario, it would cost each county resident about \$1/month – a great deal considering that health impacts from incinerator pollution add up to many times that amount.**

## Here's the math:

- Municipalities pay DCSWA \$58/ton right now (see next slide). This cost includes paying for their landfill and its pending expansion.
- Cheapest option should be switching to using DCSWA's landfill (and saving the space for Delco, not giving 75% away to others).
- Worst case scenario: the pending landfill expansion isn't granted and Delco needs to go straight to contracting with a private landfill:
  - Philly's 2019 contract with Waste Management is \$65.25/ton (will be \$72.34/ton in 2022, a 25% increase over Delco's current rate).
  - At a typical annual Delco waste generation rate of 355,000 tons, this means a \$5.1 million increase county-wide.
  - If making Chester whole, adding \$1.3 million to cover the city's lost host fees, the \$6.4M equals \$11.34/person per year (<\$1/month).



# Delaware County Solid Waste Authority

Rose Tree Park - Hunt Club  
1521 North Providence Road  
Media, PA 19063-1039  
610-892-9627 or 9628  
Fax: 610-892-9622

Joseph W. Vasturia, P.E.  
Chief Executive Officer

Board  
Joseph W. Vasturia, P.E.  
Chairman  
Thomas J. Judge, Sr.  
Vice Chairman

Mario J. Civera, Jr.  
Thomas Donahue  
Robert T. Layden  
Richard G. Nolan  
John C. Hosier

Michael F.X. Gillin, Esq.  
Solicitor

October 22, 2020

Dear Municipal Manager/Secretary:

In order for the Delaware County Solid Waste Authority (DCSWA) to continue to serve the residents of Delaware County by disposing of the Municipal Trash generated in the County it has become necessary once again to upgrade our facilities and to expand our landfill. This upgrade and expansion program makes it necessary to increase the Waste Management and Recycling Fee (WM&RF) by \$5.00 to \$58.00 per ton effective January 1, 2021.

In an April 11, 2018 letter to all 49 municipalities the DCSWA indicated that the present WM&RF could be reduced by \$ 5.00 per ton if the municipalities delivered their trash directly to Covanta Resource Recovery facility (RRF) in Chester City. This reduction will continue to apply to the new fee and make the fee \$ 53.00 per ton for all residential waste delivered directly to Covanta.

## COUNTY EYES TAX DECREASE AS BUDGET NUMBERS FIRM UP

Delaware County eyes tax decrease as budget numbers firm up



County Council Chair:

“Zidek said the money could also be used to find alternative ways to get rid of the county's waste rather than send it to Chester to be incinerated.”

Source: [https://www.delcotimes.com/news/delaware-county-eyes-tax-decrease-as-budget-numbers-firm-up/article\\_ffbbc4f8-aa80-11eb-9600-7f310797df11.amp.html](https://www.delcotimes.com/news/delaware-county-eyes-tax-decrease-as-budget-numbers-firm-up/article_ffbbc4f8-aa80-11eb-9600-7f310797df11.amp.html)

## WHERE WOULD THE MONEY COME FROM?

*If* there is an increase in costs to use the DCSWA landfill directly, this is a short-term increase until waste reduction efforts in the coming years cut waste back, creating greater savings.

**\$109 million from American Rescue Plan coming to Delco plus a budget looking so good that a tax decrease is being discussed.**



# What would it cost to keep incinerating?

## Costs we pay indirectly:

- ~\$112 million/year just from health impacts of fine particulate matter from Covanta (the share of this pollution from the 31% that is Delco's trash is about \$35 million/year)
- Over \$141 million/year just from asthma (the share of this harm that is attributable to Covanta burning Delco's trash is about \$4.4 million/year)
- Far more from impacts of cancer and other health effects caused by Covanta's pollution
- Incineration has health and environmental costs about twice that of landfills (about \$56.3 million/year more to incinerate)

Sources: The \$112 estimate comes by extrapolating from a study by an NYU Professor of Environmental Medicine using EPA's BENmap model which found that just one pollutant (fine particulate matter) from the Wheelabrator Baltimore trash incinerator causes an estimated \$55 million in annual harm to health, mostly from cutting people's lives short. According to data reported to EPA by the incinerators themselves, Covanta Delaware Valley releases a little over twice as much fine particulate matter (PM2.5) as Wheelabrator Baltimore does. See: <http://www.cleanairbmore.org/uploads/wheelabrator-health-impacts.pdf> On asthma, the Asthma and Allergy Foundation of America, on page 20 of their [2021 Asthma Capitals report](#), cites a [2018 study](#) that found the economic burden of asthma in the U.S. to be \$81.9 Billion in 2013. Dividing by Delco's share of U.S. population, that's \$141.4 million a year. However, Delco is not average. The Philly region was ranked the 7<sup>th</sup> worst [asthma capital](#) in the nation in 2021, and 4<sup>th</sup> in 2018 and 2019, so it could easily be twice the national average.

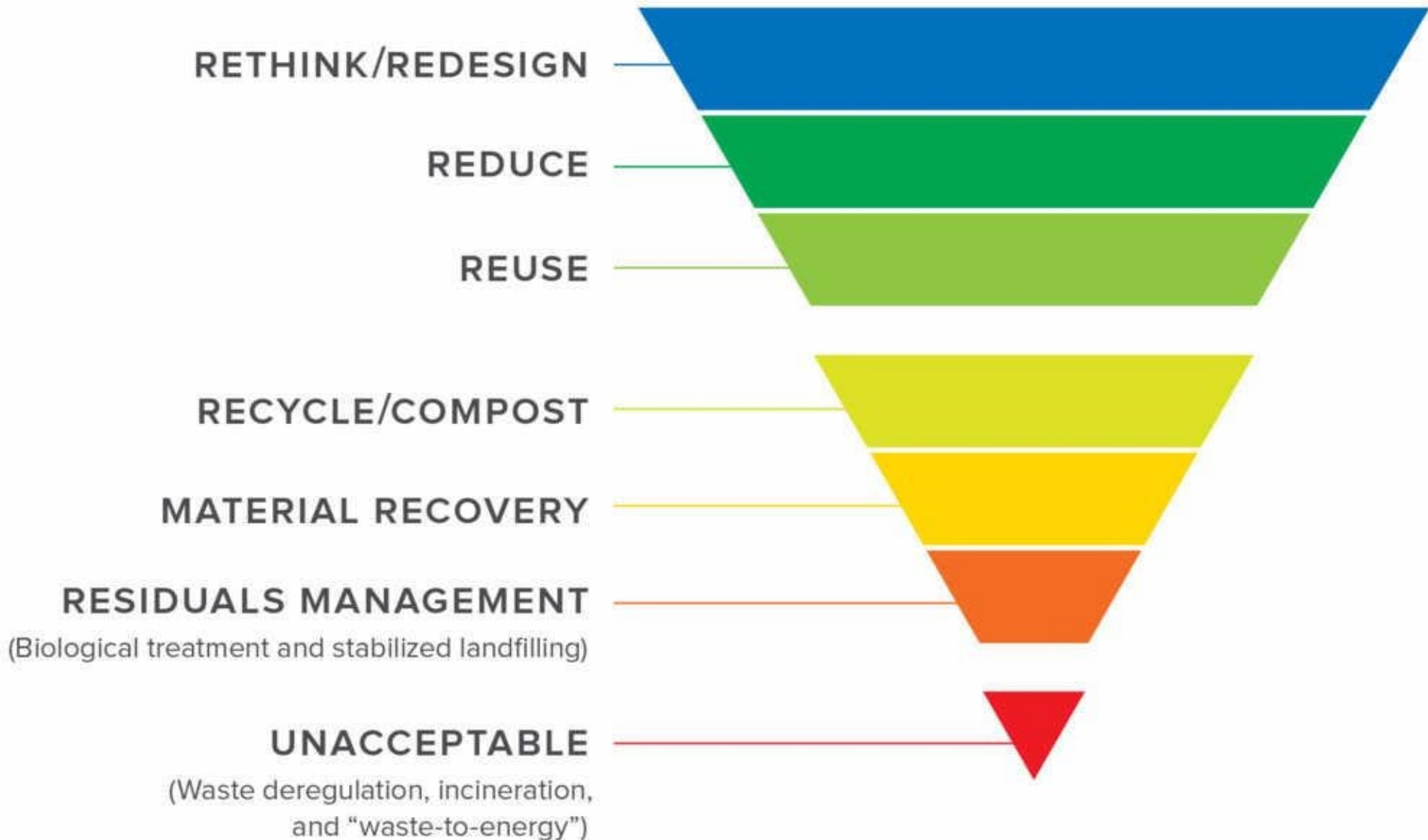
# What is Zero Waste?

## Internationally peer-reviewed definition of Zero Waste:

**“The conservation of all resources by means of responsible production, consumption, reuse, and recovery of all products, packaging, and materials, without burning them, and without discharges to land, water, or air that threaten the environment or human health.”**

Functionally, Zero Waste is a management system that means zero incineration and putting specific programs in place to reach at least 90% reduction in waste being landfilled, while consistently working for further reductions. It also means changing how waste is managed on the back end to avoid the gas, odor, and leachate impacts of conventional landfilling. These steps are known as material recovery and biological treatment (MRBT) prior to landfilling the small, stabilized residual.

# THE ZERO WASTE HIERARCHY



# Zero Waste Hierarchy

- Rethink / Redesign
- Reduce
- Source Separate:
  - Reusables
  - Recycle (multi-stream)
  - Compost
  - Waste
    - Research to see what is left, and encourage redesign
    - Recovery: mechanically remove additional recyclables
    - Anaerobically digest, then aerobically compost residuals
    - Stabilized (digested) residuals to landfill

# The back end is still a landfill...

1. Direct landfilling  
(bad, but better than incineration)
  - leachate (toxics)
  - air emissions (toxics, methane, odors)
2. Incineration → toxic ash to landfill  
(most polluting and expensive option)
  - leachate (even more toxics)
  - air emissions from ash blowing off site (toxics)
3. Anaerobic digestion → landfill  
(best option; avoids gassy, stinky landfills)
  - odor, leachate and air emissions highly minimized



# Getting to Zero Waste

- Unit-based pricing – a.k.a. “Pay/Save as You Throw”
  - reduces waste by 44% on average right away; most cost-effective strategy\*
- Curbside composting collection
- Provide right-sized bins
- Deconstruction



Deconstruction Crew, [Second Chance](#), Baltimore, MD.

Photo Credit: C. Seldman



San Francisco's bin system:  
64-gal blue recycling bin  
32-gal green compost bin  
16-gal black trash bin

\* For good resources on unit-based pricing, see resources cited on pages 16-17 in the [Beyond Incineration report](#). On deconstruction, see [Reclamation Administration](#).



# What about Chester?

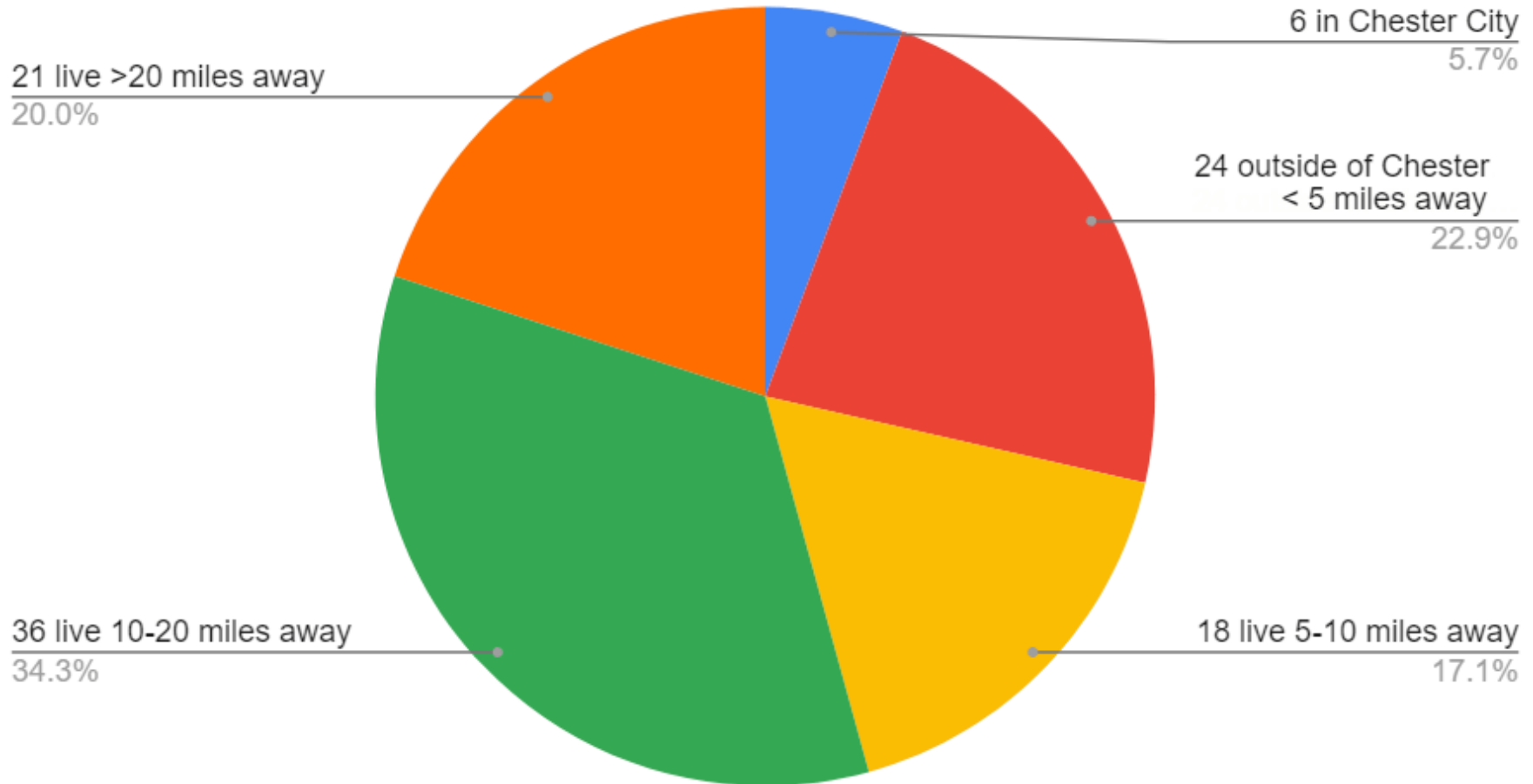
Chester gets the odors, noise, air pollution, trash trains, trash trucks, and ash trucks, but only six full-time jobs and under \$5 million/year in host fees – much less than the riverfront property could offer with responsible development, perhaps Zero Waste jobs.



# Incinerator Jobs for Chester?

Covanta explained in January 2021... they have 105 full-time, salaried employees and only six are Chester residents. 71% of these workers choose to live more than five miles away from their employer; 54% more than 10 miles away.

## Where Covanta's workers live:

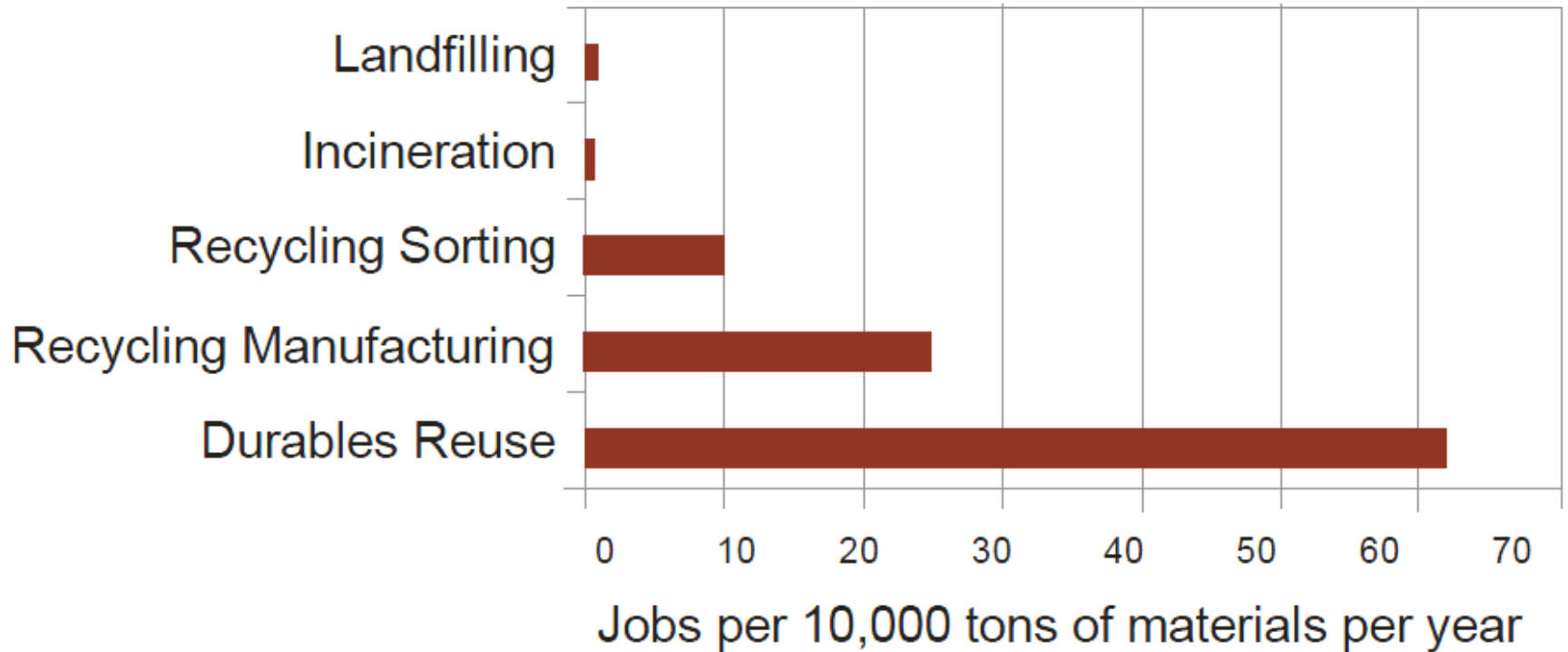


Source: <http://www.chesterresidents.org/pdf/CovantaRebutted.pdf>



# Worst Ways to Create Jobs

## Job Creation: Reuse & Recycling vs Disposal



Source: Institute for Local Self Reliance

At least 5-10 times as many jobs could be provided if Zero Waste solutions like reuse, recycling and composting replaced the incinerator.

Source: find this and further info from ILSR compiled at <http://www.energyjustice.net/jobs>

# Who speaks for Chester – Mayor Kirkland or the community?

Kirkland – once outspoken against the incinerator in the 1990s:

- urged city council to support 2-3 decades of NYC trash trains coming to Chester in 2014, over the objections of Chester residents and the unanimous recommendation of the Chester City Planning Commission
- wrote to Philadelphia in 2019 urging them to send trash to burn in Chester for another seven years, and now is supporting Covanta once again.



# Chester City & Delco residents say it's time to end incineration

- Over 1,000 county residents have signed petitions, including hundreds of Chester residents, urging the county to end incineration.
- Chester City voters just [unseated](#) a city councilmember, with incinerator issue a driving concern
- 150+ at Environmental Justice Day [march](#) in Chester on April 26, 2021, largest environmental action in Chester in years
- Over 200 people turn out for DCSWA's first ever public hearing on 5/5/2021, passionately opposed to a new Covanta contract (see [video](#) and [WHYY coverage](#))
- In 2014, Chester residents distributed 5,000 flyers and packed city hall twice, standing room only, objecting to the city approving 2-3 decades of NYC trash trains

# What about Chester?

## **Is passing a resolution telling Chester what to do?**

Passing a [Zero Waste Resolution](#) is not “telling Chester what to do.” It’s taking responsibility for where your own waste should go. Chester City government can still choose to burn their waste if they like, but the Delaware County Solid Waste Authority should not be steering the county’s trash to Chester or any incinerator. Given the choice, Chester residents would prefer less pollution and Zero Waste jobs in reuse, recycling and composting.

## **What will happen to Chester City if Delaware County stops burning trash at Covanta?**

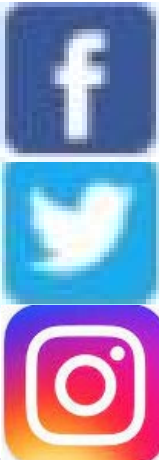
The city would have up to 31% less pollution from Covanta’s incinerator. The city budget could lose up to \$1.3 million/year in host fees. This is why our petitions and municipal Zero Waste Resolutions ask for DCSWA or the county to make Chester whole, covering any shortfall until more sustainable development can replace Covanta.





To plug in...  
484-206-5180

[getinvolved@chesterresidents.org](mailto:getinvolved@chesterresidents.org)  
[www.ChesterResidents.org](http://www.ChesterResidents.org)







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HUMAN RIGHT!**  
**BAN THE BURN!**

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[www.EnergyJustice.net](http://www.EnergyJustice.net)

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