

Testimony before
Senate Education, Health, and Environmental Affairs Committee

OPPOSING

Senate Bill 56 – Recycling and Landfill Diversion

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Good afternoon. My name is Mike Ewall, and I'm the founder and director of a national organization called Energy Justice Network. Energy Justice works at the local level with grassroots community groups throughout Maryland and the rest of the country to support efforts to stop polluting and unnecessary energy and waste industry facilities, most notably incinerators of all sorts.

Energy Justice Network opposes SB 56.

This is NOT just a study bill. The bill would require each county codify a backwards solid waste hierarchy – one that places the most polluting and expensive waste management option (incineration) above landfilling. It puts the state on the track toward incinerating 95% of the state's solid waste.

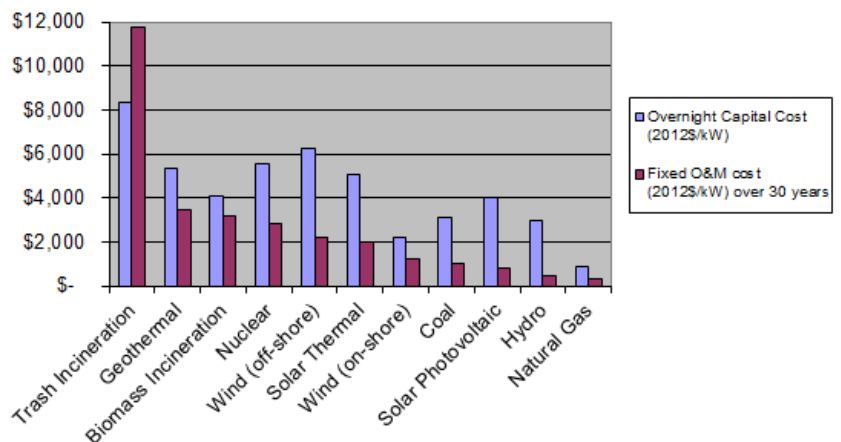
Without even having to mention incineration by name, this crafty bill is all about just that. This is apparent because:

1. "Energy recovery" is a code word for incineration, and is placed above landfilling as if it is not, itself, disposal;
2. Incineration is the game in town that would benefit, as there is no established alternative to landfilling for waste disposal in Maryland or the region;
3. Covanta – the nation's largest waste incineration corporation – wrote the bill.

Maryland, more than any other state, is currently targeted by the waste incineration industry, with major facilities being permitted in Baltimore and Frederick, and others on the way. This industry is so controversial, polluting and financially risky that no new incinerator has been built in the country since 1997, yet Maryland is opening its arms to accept what communities in other states have been pushing out.

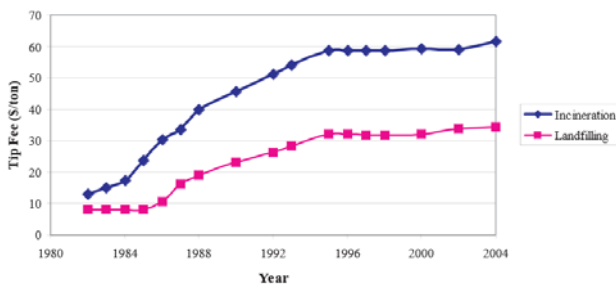
Waste incineration is the most expensive and polluting way to manage waste or to produce energy. It is more expensive to build or operate than any other form of energy, according to the Energy Information Administration.¹ It is more

Cost to Build and Operate Electric Power Plants (see footnote 1)



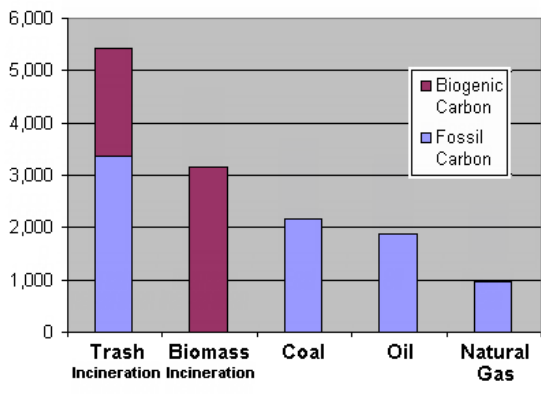
¹ "Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants," U.S. Energy Information Administration, April 2013. See Table 1, p.6 in www.eia.gov/forecasts/capitalcost/pdf/updated_capcost.pdf

Incineration More Expensive than Landfills²



CO₂ Emissions from U.S. Electric Power Plants

in pounds of carbon pollution per unit of energy produced (lbs/MWh)



Source: U.S. EPA eGRID 2012 Database
Analysis by Energy Justice Network, www.EnergyJustice.net

expensive than landfills according to the incinerator industry's own trade association president last year, and other industry data.³

“Waste-to-energy is an additional capital cost. That is not in dispute, compared to a landfill... compared to a landfill, which is a less capital-intensive structure – it is more expensive. If you had a landfill next to a waste-to-energy facility, then almost in every case, you would think the landfill is going to be cheaper.”

-Ted Michaels, President, Energy Recovery Council [the trash incineration industry's trade association], March 18, 2013 testimony before Washington, DC City Council⁴

EPA's data shows that incinerators are more polluting per unit of energy than coal power plants on every pollutant for which there is national data available. They emit 28 times as much dioxin, 6 times as much mercury, 2.5 times as much carbon dioxide (CO₂), 3.2 times as much nitrogen oxides (NO_x), and 20% more sulfur dioxides.⁵ Incinerators do not replace landfills, but – after polluting the air – still require smaller, *more toxic* landfills to handle the ash.

Environmental Justice and Lack of Monitoring: Often located in low-income and minority communities, incinerators are poorly monitored, requiring only once a year testing for most pollutants.⁶ The Wheelabrator BRESKO incinerator in Baltimore, during an annual test, was found to be violating toxic mercury air pollution limits in recent years, but no one knows whether this is a regular occurrence since there is no testing 364 days of the year.⁷

Shift from public to private sector: Only one of the state's 22 landfills is privately owned. A shift from landfills to incinerators or incinerator-like waste-to-fuel facilities would shift many public dollars into private hands, leaving Maryland's communities with less public control over its waste system.

Hauling costs would increase dramatically: Maryland's 22 landfills are more plentiful and are evenly distributed throughout the state.⁸ The state's 3 existing incinerators and the several proposals for incinerators or other alternatives are all clustered in the center of the state, resulting in increased hauling costs for southern Maryland and in the poorest parts of the state on the Eastern Shore and western Maryland.

Incineration makes landfills (receiving ash) more toxic: By producing toxins that didn't already exist, and making existing ones more available, the state's public landfills will receive the burden of increased toxic contamination of groundwater.

Don't raid the state recycling fund: The bill orders the task force to consider allowing the state's recycling fund to be raided to subsidize incinerators (point 15 on page 6).

Further information on incineration, and more documentation on the statements above are available upon request. Most can be found in the factsheet, powerpoint and other resources available at: www.energyjustice.net/incineration

² National Solid Waste Management Association 2005 Tip Fee Survey, p4. www.environmentalistseveryday.org/docs/Tipping-Fee-Bulletin-2005.pdf

³ See slides 24-25 in www.energyjustice.net/files/incineration/incineration.pdf for sources.

⁴ Waste bill hearing before DC City Council Environmental Committee. http://dc.granicus.com/MediaPlayer.php?view_id=29&clip_id=1662 at 1:44.

⁵ For CO₂, SO_x and NO_x data, see U.S. EPA, eGRID 2012 data, www.epa.gov/egrid/. Other data calculated from EPA dioxin and mercury reports.

⁶ www.ejnet.org/toxics/cems/

⁷ "Maryland fines Wheelabrator Baltimore \$77,500 for air pollution," Baltimore Business Journal, Dec 13, 2011.

www.bizjournals.com/baltimore/news/2011/12/13/maryland-fines-wheelerator-baltimore.html

⁸ www.energyjustice.net/t=ceq5kd

Incineration 101

Municipal solid waste (trash) **incineration is the most expensive and polluting way to manage waste or to make energy.**

Only 11.7% of U.S. trash in the U.S. is incinerated. The rest is recycled, composted or landfilled.

Incineration is a dirty word, and industry knows it, so they use other terms to make it sound good, like resource recovery, trash-to-steam, waste-to-energy and energy from waste. All of these terms are untruthful and misleading. The most aggressive in arguing that they are not incinerators are specific



types of incinerators using technologies known as gasification, pyrolysis and plasma arc. In the U.S. and in the European Union, these technologies are legally defined and regulated as incinerators. They share the same fundamental problems with conventional incinerators, but they operate in two stages, first turning the waste into a gas, then burning it, letting the companies pretend that they aren’t actually incinerating (burning) the waste itself.

In reality, incinerators are **waste-OF-energy** facilities. Incinerators destroy resources that are better reused. If the same materials burned in trash incinerators were recycled or composted, they would save 3–5 times more energy than incinerators can make from burning them, since raw materials don’t need to be extracted and produced all over again. Most of the energy in materials, like paper, was spent making them, but is not physically present in the paper itself.

Not Renewable

Incineration is not renewable energy. While many state renewable energy laws count it as renewable energy, municipal waste is non-renewable, consisting of discarded materials such as paper, plastic and glass that are derived from finite natural resources such as forests that are being depleted at unsustainable rates. Burning these materials creates a demand for “waste” and discourages much-needed efforts to conserve resources, reduce packaging and waste and encourage recycling and composting.

Environmental Racism

Incinerators are an environmental racism issue. Incinerators for trash, hazardous waste, sewage sludge and other types of waste are typically located in communities of color and low-income communities. At least with hazardous waste facilities, race is more of a factor than class, so it’s not just that people of color tend to live in low-income communities. Some are located in relatively affluent communities of color.

Dirtier Than Coal

To make the same amount of energy, burning trash pollutes the air far more than burning coal, even though incinerators are generally newer and have more air pollution controls than coal power plants. Trash incinerators release 28 times as much dioxin air pollution than coal, about six times more lead and mercury, 3.2 times more nitrogen oxides (NO_x), 2.5 times as much carbon dioxide (CO₂), twice as much carbon monoxide (CO) and 20% more sulfur dioxide (SO₂).

Sometimes called “trash-to-steam” plants, incinerators cannot turn trash into mere water vapor, as there are all sorts of elements in waste, not just hydrogen and oxygen to make H₂O (water). Trash contains toxic metals like arsenic, lead and mercury, halogens like chlorine that produce acid gases and ultratoxic dioxins and furans when burned, carbon, sulfur and nitrogen compounds that form some of the above-mentioned pollutants, and much more.

Incinerators are really “trash-to-toxic-

ash-and-toxic-air-pollution” facilities. Imagine that you throw an old pen “away” and it goes to a nearby landfill. There are metals in the pen, some of which may be toxic, as well as plastics and inks that may be chlorinated. Buried in a landfill, it will take a very long time before any of those chemicals can reach you in a form that you can breathe or drink. However, if that pen were sent to an incinerator, any toxic materials in the pen are instantly made available for breathing and drinking through a combination of air pollution and the toxic ash produced, which still goes to a landfill, but now can blow around and leach into groundwater more readily. In addition to making toxic elements more available, burning creates new pollutants that weren’t there to begin with, including acid gases, NO_x, CO, CO₂, SO₂, dioxins and furans.

Incinerators, like nearly all facilities with smokestacks, do not monitor what they are putting into the air on a day-to-day basis. Permits only tend to require three pollutants — CO, NO_x and SO₂ (none of the toxic ones) — to be monitored on a continuous basis. Several other pollutants are tested once per year; many not at all. Annual testing is like having a speed limit where a speed trap is set just one day a year, there are signs warning “speed trap ahead” and the driver’s brother runs the speed trap (the companies do their own testing). In reality, incinerators are “speeding” many other days of the year, with excessive emissions during startup, shutdown and malfunction times, when testing is not done.

Incinerators do not replace landfills, but require smaller, more toxic, landfills for their ash. Any pollutants captured in air pollution controls are added to the ash, so the cleaner the air, the more toxic the ash. Ash is more toxic than unburned trash because new toxins were formed by burning, and since existing toxins are more available. 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 toxins can leach out, polluting groundwater.

Health Effects

Incinerators are bad for people's health. Studies have found, in communities around incinerators:

- Increases in pre-term babies and babies born with spina bifida or heart defects.
- Increased cancers, especially: larynx, lung, colorectal, liver and stomach cancers, leukemia (blood cancer), childhood cancers, soft-tissue sarcoma and non-Hodgkin's lymphoma.
- Increased dioxins in the blood of incinerator workers.

Most Expensive — Bankruptcies and Bailouts

Studies done for U.S. Energy Information Administration in 2010 and 2013 show that trash incinerators are, by far, the most expensive way to make energy. Even though trash incinerators get paid to take their fuel, they're the most expensive to build and most expensive to operate and maintain — even worse than nuclear and biomass. They're nine times more expensive to build than a conventional natural gas power plant and 30 times more expensive to operate. They even cost about twice as much to build as solar and nearly four times as much as wind.

Incineration is also far more expensive than landfiling. It competes only by locating in high-priced waste markets and by locking local and county governments into long-term monopoly contracts, often with "put-or-pay" clauses. Such clauses require that a certain amount of waste be provided to the incinerator, or the governments pay the full amount, even if not providing enough waste. This discourages waste reduction, recycling and composting, because the community can't save money by doing these things. It also allows the incinerator company to fill that extra capacity with waste from other places, getting paid twice for the same capacity.

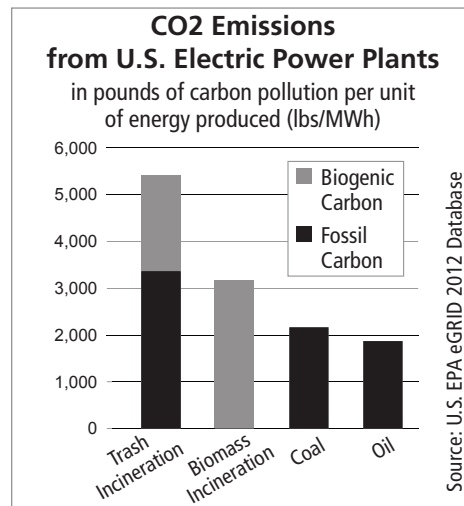
Expensive incinerators have driven some local governments into bankruptcy. The most spectacular examples have been Harrisburg, Pennsylvania (the largest city bankruptcy at the time, filed in 2011), and Claremont, New Hampshire, where 29 towns filed for bankruptcy due to "put-or-pay" contracts. In other cases, massive bailouts have been necessary, such as the \$1.5 billion in state bailouts for New Jersey's five incinerators, and the \$1.2 billion in debt payments at the Detroit incinerator, contributing to that city's

bankruptcy. In most other cases, the expense of incineration is covered other ways, such as through hidden fees on property tax assessments, by accepting more profitable industrial wastes, and/or by cranking up fees on the captive local community while offering discounted waste disposal to outlying areas to compete with landfills and attract waste to meet capacity.

Incinerators are terrible ways to produce jobs. For every 10,000 tons of waste processed per year, incinerators and landfills create one job, while recycling facilities create 10 jobs and reuse, remanufacturing and repairing materials creates far more (20-300 jobs depending on the material). With a national recycling rate of less than 33%, the U.S. recycling industries currently provide over 800,000 jobs. A national recycling rate of 75% would create 1.5 million jobs.

Competition with Recycling and Clean Energy

Incineration competes with waste reduction, recycling and composting, both through its contracts demanding a certain amount of waste generation, and by virtue of the fact that incinerators need recyclable materials, like paper, tires, wood and plastics, to be able to burn effectively. Within renewable energy policies, incinerators (and landfills that burn their gas for energy) often get subsidized as renewable energy, but recycling and composting do not. Burning trash, "biomass" and landfill gas crowds out wind power in renewable energy mandates.



The "Carbon-Neutral" Myth

While EPA data shows that trash incineration is 2.5 times as bad as coal for global warming (CO₂ pollution per amount of energy produced), the industry pretends

that they're carbon negative! They pull off this trick by comparing themselves to methane emissions from landfills, and by not counting the portion of emissions from burning paper and other organic material. Even if you don't count that "biogenic" fraction of what is in waste, the CO₂ emissions from the rest (plastics and such) is still 55% worse than coal. However, the "carbon neutral" myth has been repeatedly busted in recent years, since it takes trees centuries to suck all of the carbon back up, even if trees were replanted and left to grow for that long. It's true that landfills are worse than incinerators for global warming, but this can be avoided by keeping clean compostable organics out of landfills, and by digesting dirty organics before landfilling them, so that their methane can be contained and used for energy in a cleaner way.

It Doesn't Work in Europe

Incinerator pushers like to point across the ocean and claim that incineration works in Europe and Japan, where they rely heavily on incineration. Incinerators in these countries are also very polluting, still compete with recycling, and some European countries have found themselves having to import waste from neighboring countries just to keep their incinerators fed with enough waste to operate.

Real Solutions for Energy and Waste

We can meet all of our electricity needs with conservation, efficiency, wind, solar and energy storage. Sometimes incinerators are used for heating as well, but those needs are best met with conservation, efficiency, geothermal, air-source heat pumps and solar hot water.

The "zero waste" alternative aims to eliminate incinerators and cut use of landfills by at least 90%. Some communities, especially San Francisco, are well on their way. These solutions involve maximizing source reduction, reuse, recycling and composting. For whatever is left, it must be examined to see what failed to get diverted upstream, so products can be redesigned or phased out. Any remainder should go through mechanical and biological treatment before landfilling to get out more recyclables, and digest the remaining waste first, avoiding gassy landfills and their global warming impacts.