

# Frequently Asked Questions: Albany County Clean Air Law

## Why is a local Clean Air Law needed?

Waste burning is an air quality threat for the whole region, with toxic pollution even worse than fossil fuels. Since the county has been delegated the power to be more protective than the state and federal minimums, the county legislature can adopt rules to hold waste burning facilities to modern standards.

## Why is waste burning so dangerous?

Facilities burning solid fuels, especially wastes, are among the largest air polluters in any jurisdiction. Waste incinerators rank at the top alongside paper mills, cement kilns, airports, and oil refineries when examining EPA air pollution databases.

LafargeHolcim has sought to burn waste from 50 or more Connecticut towns at their Ravena plant in the Town of Coeymans. After abandoning that in late 2017, they pushed hard to burn tires.

It's well known that coal burning is filthy, even with pollution control devices. However, waste burning is even dirtier. Comparisons of data from burning coal vs. a mixture of tires and coal shows that most pollutants increase when mixing tires into the fuel stream.

When arguing for burning tires in Coeymans, Lafarge provided a small number of data points. A much more comprehensive compilation of available data on the topic shows that adding tires to the mix with coal...

INCREASES: Chromium, Copper, Lead, Nickel, Zinc, Dioxins/Furans, PCBs, polycyclic aromatic hydrocarbons (PAHs), Sulfur Dioxide, Carbon Monoxide, and Benzene

MAY INCREASE (data isn't strong enough to say for certain, but it trends in the direction of increasing): Arsenic, Barium, Beryllium, Cadmium, Magnesium, Manganese, Mercury, Chlorine, and Hydrochloric Acid

DECREASES: Fluoride / Hydrofluoric Acid, Nitrogen Oxides (NOx)

On balance, it's clear that the impact of tire burning is far greater. Dioxins alone are 140,000 times more toxic than mercury.<sup>1</sup> There is no safe dose of either dioxin or mercury. The presence of copper and zinc in tires boosts dioxin formation such that some facilities have found dioxin pollution increases of as much as 4,140% from just mixing in 4-8% tires.<sup>2</sup> Dioxins climb up the food chain and contaminate meat and dairy products, then bioaccumulate in our bodies, harming infants as it can cross the placenta and be passed on via breast milk. Dioxins cause cancer, and also severe reproductive and developmental problems (at levels 100 times lower than those associated with its cancer-causing effects). Dioxin is well-known for its ability to damage the immune system and interfere with hormonal systems. It's also documented to contribute to birth defects, inability to maintain pregnancy, decreased fertility, reduced sperm counts, endometriosis, diabetes, learning disabilities, immune system suppression, lung problems, skin disorders, and lowered testosterone levels.<sup>3</sup>

Trash burning is documented to be more polluting than coal. To make the same amount of energy as a coal power plant, trash incinerators release 28 times as much dioxin than coal, 2.5 times as much carbon dioxide (CO<sub>2</sub>), twice as much carbon monoxide, three times as much nitrogen oxides (NOx), 14 times as much mercury,

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<sup>1</sup> [www.epa.gov/rsei](http://www.epa.gov/rsei)

<sup>2</sup> [www.energyjustice.net/tires](http://www.energyjustice.net/tires)

<sup>3</sup> [www.ejnet.org/dioxin](http://www.ejnet.org/dioxin)

nearly six times as much lead and 70% more sulfur dioxides. The New York DEC has documented that trash incinerators in the state are far dirtier than the state's coal power plants when adjusting for size differences.<sup>4</sup>

### **It's the state's job to regulate air pollution... why don't we leave this up to the state?**

The state and federal environmental agencies set the minimum standards for industry to meet, but state law leaves it up to local governments to be more protective where needed. It's typical for the state to freely grant permits for waste burning, since state regulations allow it. However, these permits lack modern monitoring and disclosure requirements, and have emissions limits and waste testing requirements that aren't as protective as they ought to be. A company can follow state regulations and still be a large air polluter that is unhealthy for county residents. State regulations are not strong enough, and monitoring for most pollutants is too infrequent (most pollutants are tested just once per year – more on this below).

### **Who does the Clean Air Law apply to?**

The Law applies narrowly to new waste burning facilities. This includes existing facilities that switch fuels to start burning waste. It only applies to facilities that are capable of burning at least five tons of waste per day. The law does NOT apply to residential heating systems or anaerobic digesters (used in some sewage treatment plants or farms). The law also does not apply to fossil fuels, but covers a wide range of waste-based fuels.

### **Can a Clean Air Law apply to existing facilities? Aren't they grandfathered?**

The legislation, as currently written, applies only to facilities that start burning waste after January 1, 2019. No current facilities meet this definition. To be even-handed, the legislation *could* be amended to cover facilities that burn waste without regard for when that waste burning practice started. There is no such thing as "grandfathering" or "vested rights" when it comes to air or waste regulation. More protective air pollution and waste standards are routinely being adopted and applied to existing industrial facilities by federal and state law and regulations.

### **Who pays for the equipment, website and enforcement?**

The Law is designed to pass costs on to the polluters themselves. The county can generate revenue from fines issued if a facility fails to follow the emissions monitoring, disclosure and control requirements. Most likely, any company subject to the law would choose not to locate in the county, and the need for the county to do any enforcement would never occur unless a company chose to subject themselves to the law. No company has done so in the history of these local laws. All have chosen not to build.

### **Would the law supersede state law? Would state law supersede local laws? Would a county clean air law supersede a municipal one?**

No. State and federal law will still apply. State and federal clean air laws specifically authorize additional clean air laws at the local level, so long as they're as strict or stricter. The same principle applies to the county and municipalities. The county can pass a law, and if it does, townships and boroughs can also have their own laws, so long as they're not less strict than the county (or state). If a polluter is violating both state and local clean air laws, they can be fined by both levels of government, and if they violate only the stricter local law, that they can be fined just at the local level. The Clean Air Law adopts the state and federal standards and enables the County to enforce these standards more routinely using data from continuous monitoring.

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<sup>4</sup> [www.energyjustice.net/incineration/worsethancoal](http://www.energyjustice.net/incineration/worsethancoal) - see footnote 5 on this page for the New York Department of Environmental Conservation report on trash incineration vs. coal, with comparison charts at the end of the report.

## How does the Clean Air Law work?

The Clean Air Law prohibits the burning of any more than 25 tons of waste per day.

For facilities able to burn more than five tons of waste per day, the following regulations apply if they burn more than one ton per day:

### 1. Use modern technology to continuously monitor 20 different air pollutants.

- Currently, only a few pollutants are tested this way, and none of the toxic ones.
- This is critical since the other pollutants are only tested once a year, under ideal operating conditions. For most pollutants, no one knows what is coming out each day, and no enforcement can be done if there is no monitoring.
  - Dioxins are the most toxic human-made chemicals known to science, and mainly come from incinerators. They're tested just 6 hours a year. Continuous testing used in Europe has shown that actual dioxin emissions are 30-50 times higher than we think they are when just looking at annual stack tests.
  - Annual stack testing is like having a speed limit, but allowing drivers to drive with no speedometer, and just setting a speed trap once a year, while setting up signs warning 'speed trap ahead' to warn drivers to slow down... and letting the driver's brother run the speed trap (the companies do their own testing). In reality, smokestack facilities are 'speeding' many other days of the year, with excessive emissions during startup, shutdown and malfunction times, when testing is not done.
  - Continuous emissions monitors (CEMs) are already used for as many as six pollutants at trash incinerators in the U.S. – carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and sometimes even hydrochloric acid (HCl) and ammonia (NH<sub>4</sub>). Permits issued for newer trash incinerators have required some additional pollutants to be monitored, such as hydrofluoric acid (HF) and mercury (Hg). Equipment is also commercially available to continuously monitor dioxins and furans, particulate matter (PM), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and over 50 elements including many toxic heavy metals of concern, such as arsenic, cadmium, chromium, lead, manganese, nickel, selenium and zinc. The technology for this was tested and verified by EPA over a decade ago, but isn't being required in state air pollution permits. See [www.ejnet.org/toxics/cems](http://www.ejnet.org/toxics/cems)

### 2. Disclose this pollution information on a public website, real-time, for all to see.

- At least four waste incinerators in North America have this in place already. The technology exists to provide this level of public transparency and ought to be used. The data is already required to be public by federal regulation, and is collected by state environmental agencies, but is not easy to access.

### 3. Reduce air pollution.

- Set strict emissions standards for some of the most significant air pollutants: nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), mercury, and dioxins. The standards are based on the most protective limits for trash incinerators in North America.

### 4. Ash from waste burning must be disposed of at a licensed hazardous waste landfill.

## By what authority can the county government adopt the Clean Air Law?

The federal Clean Air Act, at 42 U.S.C. § 7416, allows states and their political subdivisions to have stricter air pollution laws than the federal floor:

### § 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.

New York's Environmental Conservation Law § 19-0709, also expressly authorizes local air pollution laws:

Local laws, ordinances and regulations – Any local laws, ordinances or regulations of any governing body of a county, city, town or village which are not inconsistent with this article or with any code, rule or regulation which shall be promulgated pursuant to this article shall not be superseded by it, and nothing in this article or in any code, rule or regulation which shall be promulgated pursuant to this article shall preclude the right of any governing body of a county, city, town or village to adopt local laws, ordinances or regulations which are not inconsistent with this article or with any code, rule or regulation which shall be promulgated pursuant to this article.... Any local laws, ordinances or regulations of a county, city, town or village which comply with at least the minimum applicable requirements set forth in any code, rule or regulation promulgated pursuant to this article shall be deemed consistent with this article or with any such code, rule or regulation.

**New York local governments also may regulate waste management practices more strictly.** At the federal level, the Resource Conservation and Recovery Act, 42 U.S.C. § 6929, states:

“[N]o State or political subdivision may impose any requirements less stringent than those authorized under this subtitle respecting the same matter as governed by such regulations... **Nothing in this title shall be construed to prohibit any State or political subdivision thereof from imposing any requirements, including those for site selection, which are more stringent than those imposed by such regulations....**”

New York's Environmental Conservation Law § 27-0711, also expressly authorizes local waste laws:

Local laws, ordinances and regulations – Any local laws, ordinances or regulations of any governing body of a county, city, town or village which are not inconsistent with this title or with any rule or regulation which shall be promulgated pursuant to this title shall not be superseded by it, and nothing in this title or in any rule or regulation which shall be promulgated pursuant to this title shall preclude the right of any governing body of a county, city, town or village to adopt local laws, ordinances or regulations which are not inconsistent with this title or with any rule or regulation which shall be promulgated pursuant to this title provided.... Any local laws, ordinances or regulations of a county, city, town or village which comply with at least the minimum applicable requirements set forth in any rule or regulation promulgated pursuant to this title shall be deemed consistent with this title or with any such rule or regulation.

## **Enforcement and Cost**

Enforcement costs are likely to be zero. Applied to the current state of industrial facilities in Albany County, there are no facilities that would qualify as a New Waste Disposal Facility. Passed as written, it's extremely unlikely that any proposed facility would choose to subject itself to the law's requirements.

New waste incinerators are pretty much unheard of. No new trash incinerator has been built at a new site in the U.S. since 1995, despite hundreds of attempts in that time. New incinerators for other types of waste are also extremely unusual and face tremendous community opposition. In fact, the NY DEC has documented that trash incinerators in the state are far dirtier than the state's coal power plants, and the state legislature has banned new trash incinerators from the Fingers Lakes region when one was proposed in the last year. Rare as it is, no incinerator company would propose to build in a county where there are extra requirements.

As for existing industrial facilities like Lafarge, those burning conventional (fossil) fuels have an economic incentive to start burning waste to save on fuel costs. Depending on the type of waste, they can go from paying for fuel to being paid to take waste. In fact, a cement kiln in Pennsylvania was once found to be making more money accepting hazardous waste than they made producing cement. That said, switching to waste burning at a large industrial facility isn't very attractive when limited to no more than 25 tons per day. A Lafarge representative has stated that the main barrier to their burning tires isn't the monitoring requirement in the Clean Air Law, but the 25 ton/day limit. Most cement kilns burning tires are burning between 25 and 65 tons/day, or in the ballpark of 1 million scrap tires per year or more (which is about 30 tons/day).

In the unusual situations where enforcement would be necessary, there are two primary scenarios. First, if a company is blatantly violating the law, by bringing in tons of waste per day to burn without doing the required monitoring and disclosure, this will easily be detected. The law requires a public website with specific emissions information. It'll be known if this exists and can be monitored by any member of the public. Even in a rural area, there are enough neighbors who would notice many tons of waste starting to be transported into the area, and these residents can notify the county or use the community enforcement provision if necessary. The county Health Department can easily send a code enforcement officer a couple times a year to see if there is a major stockpile of waste at a facility reported to be flouting the law.

The second situation is where a company aims to comply with the law, burning between 1 and 25 tons of waste per day and complying with the various monitoring, disclosure, emissions control, and waste handling requirements. Most of the enforcement can be done by having a county staffperson monitor the disclosure website and issue notices of violation for reported exceedances. The county can also choose to hire an environmental engineer to do periodic inspections of a facility to ensure that monitoring and control devices are working properly.

Enforcement costs are likely to be zero, or minimal in the event that there is a need to enforce, as the primary costs are placed on the new waste disposal facility, not on the county. Fines could be used to cover enforcement costs.

## **Jobs**

Waste incinerators are not good job producers. Compared to other ways to manage trash, trash incineration produces the fewest jobs. Based on research by the Institute for Local Self-Reliance, even landfills produce about 80% more jobs, but zero waste solutions produce far more. Recycling and composting produce 5-10 times as many jobs, while material reuse provides as much as 300 times as many jobs for the same amount of material that might otherwise be burned.

Lafarge has implied in Coeymans that their workers' jobs are at risk if they do not burn tires. This is a hollow threat, because there is no real chance of the plant closing if they cannot save (or make) money burning waste. This facility, due to a major enforcement action by EPA, invested around \$300 million to bring the plant up to more modern standards. They're located next to a limestone mine and a large limestone deposit, on a major port near major markets. It's unrealistic to think that they'd close a plant over this. Also, if Lafarge were mainly concerned about jobs, they wouldn't be talking about converting from coal to gas to provide most of their heating needs, since gas is highly automated and produces the fewest jobs of any energy source, by far.

### Why 25 tons?

Commercial operations of waste incinerators are usually far larger than this, and are intended to import waste from a wide region. The average trash incinerator has the capacity to burn about 1,100 tons/day. Proposals for new facilities are usually much larger. For other wastes, or for co-firing of waste in existing industrial facilities, volumes can be much lower. Tire burning in cement plants can range from around 25-65 tons/day, typically burning one million tires per year or more. The ordinance is not trying to ban small operations between one and 25 tons/day so long as they comply with protective requirements using modern technologies available for continuous emissions monitoring, disclosure, and pollution control.

### Where did the emissions limits come from?

The limits on the four pollutants for which more protective standards are set – nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>), mercury, and dioxins – are based on the two newest trash incinerators permitted and currently operating in North America: West Palm Beach #2 in Florida, and Durham-York Energy Center in Ontario.

### What health effects are caused by the chemicals known to increase with waste burning?

<b>Chromium (VI)</b>	Lung cancer, shortness of breath, coughing, and wheezing
<b>Lead</b>	Causes damage to nervous system and kidneys, lowers IQ in children, increases likelihood of antisocial behavior
<b>Nickel</b>	Lung and nasal cancers
<b>Dioxins/Furans</b>	Most toxic chemicals known to science. 140,000 times more toxic than mercury. Causes cancers, birth defects, inability to maintain pregnancy, decreased fertility, reduced sperm counts, endometriosis, diabetes, learning disabilities, immune system suppression, lung problems, skin disorders, lowered testosterone level, and much more. 93% of exposure is through meat and dairy products as it concentrates in animal fat once in the environment. More at <a href="http://www.ejnet.org/dioxin">www.ejnet.org/dioxin</a>
<b>Polycyclic aromatic hydrocarbons (PAHs)</b>	Cancer, cataracts, kidney and liver damage, and jaundice.
<b>Sulfur Dioxide</b>	Triggers asthma attacks, increases lifetime risk of chronic respiratory and heart diseases and stroke.
<b>Carbon Monoxide</b>	Causes headaches and dizziness; increases lifetime risk of heart disease.
<b>Mercury</b>	Causes damage to nervous, digestive, and immune systems, lowers IQ in children.
<b>Hydrochloric Acid</b>	Irritates eyes, skin, and nose, damages lungs.

For details on which pollutants increase or decrease when adding tires to coal burning (as Lafarge proposes), see Lafarge's statements, side-by-side with our more comprehensive summary of the science, at [www.energyjustice.net/files/ny/TiresVsCoal.pdf](http://www.energyjustice.net/files/ny/TiresVsCoal.pdf)

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