

WHY THE CLIMATE CRISIS COALITION OF THE TWIN CITIES VEHEMENTLY OPPOSES THE EXPANSION OF THE HENNEPIN COUNTY GARBAGE BURNER

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THE BASIS FOR 3CTC'S OPPOSITION

The Climate Crisis Coalition of the Twin Cities is dead set against the expansion of the Hennepin Energy Recovery Center (HERC), which should **never** have been built in the first place. We are opposed to HERC burning an additional 35,000 tons of trash per year. Our opposition stems from the greenhouse gasses HERC already spews forth that contribute to global warming, the toxins, heavy metals and ultrafine particulate matter it emits that damage the health of human beings and wildlife and the horrendous volume of resources it sends up in smoke. This is because the monstrosity must continue to be fed in order to provide energy to fuel a dissipative society that refuses to scale and power down. An increase in the tonnage of refuse-derived fuel (RDF) from 365,000 to 400,000 is significant, and the combustion of 21% more trash will mean 21% more deadly pollutants issuing from the smokestack and the delivery trucks.

GREENHOUSE GAS EMISSIONS

When it comes to reducing greenhouse gas emissions, companies like Covanta Energy are lying to the public when they claim that trash incineration is helping to mitigate climate change. Their false claim is based upon the happenstance that they might actually recycle some of the metals that are trucked in and the fact that burning rubbish avoids the combustion of coal to generate electricity and reduces methane emissions from landfills. However, they choose to ignore the greenhouse gases that are directly emitted by RDF incineration. They also turn a blind eye to the fact that the waste stream could be greatly reduced by composting and recycling, thereby producing vastly fewer virgin materials and goods whose hydrocarbon consumption contributes greatly to global warming. Worst of all, they pretend that burning rubbish is carbon-neutral and green, which is utter nonsense.

The EPA, in which 3CTC puts **very little stock** as a regulatory agency, is, nonetheless, forced to list incinerators among the top 15 major

sources of direct greenhouse gases. In the period from 1990 to 2005, carbon dioxide emissions rose by 91% due to the amount of plastics and other fossil-fuel based materials that have mounted up in municipal solid waste (MSW). The fossil fuel emissions from burning plastics and synthetic rubber, leather and textiles account for one-third of waste incineration's carbon dioxide emissions.

However, **not included** in the EPA inventory is the CO₂ from biomass such as wood, paper, food scraps and yard trimmings, which should either be composted to replenish the soil or recycled. A shameful two-thirds of HERC's waste is paper and cardboard and "other conveniently combustible material". We may ask: Why is there so much plastic and paper in garbage that is incinerated? The answer is: Because they produce the most heat per pound and because capitalist industry is hopelessly bent upon extracting and processing the last barrel of oil and pulping the last tree in our forests, hence, the overabundance of these feedstocks. These two sad states of affairs provide further justification for why we must leave the petroleum in the ground where Mother Nature put it and keep loggers' greedy hands off the world's forests so they can continue to serve as vital carbon sinks. The reality is that per megawatt hour, incinerators emit more CO₂ than any fossil-fuel based electricity source. Coal-fired power plants give off 2,249 pounds of carbon dioxide per megawatt hour compared with 2,899 lbs. CO₂/mWhr from incinerators.

Besides CO₂, nitrogen oxide is another gas from trash incineration that directly warms the atmosphere. Then there are the **indirect** greenhouse gases from rubbish burners that influence climate change via the photochemical formation of tropospheric ozone and the destruction of stratospheric ozone. These are nitrous oxides, carbon monoxide and volatile organic compounds. The continued destruction of the ozone layer is greatly affecting the winds and ocean currents that are causing the Southern Ocean to lose its ability to further absorb anthropogenic carbon dioxide emissions and as a result, to degas carbon back into the atmosphere. As a result, the planet is losing an essential carbon sink. This is, in part, why CO₂ releases have spiked every year this century.

Another emission given off by garbage burners is sulfur dioxide, which can affect the heat-absorbing characteristics of the atmosphere in addition to causing acid precipitation along with nitrous oxides (NOX) and hydrogen

chloride. No doubt, Ontario is thanking us for those. The HERC releases 500 tons a year of NOX, which are precursors to smog that is harmful to children, the elderly and those with cardio and pulmonary conditions.

Then there is the noxious diesel exhaust from the hundreds of garbage trucks dumping their loads. Along with particulate matter, the fumes contain carbon dioxide, carbon monoxide, nitrous oxides, sulfur dioxide, hydrogen chloride, hydrogen fluoride, volatile organic compounds (VOCs), dioxins, furans and a host of heavy metals such as cadmium, lead, mercury, arsenic, antimony, chromium, copper, manganese, nickel and vanadium. All of these go directly into the atmosphere either warming or contaminating it. The incinerator industry claim that its equipment has zero emissions is completely false since the trucks alone are a serious cause for concern.

What is most curious is that people have been more concerned about the foul smell from the garbage being hauled in and piled up and how it will offend the sensibilities of baseball fans that they are about the toxic fumes the vehicles and burner give off. The nasty odors aren't the half of it!

TOXIC CONTAMINANTS

Covanta Energy's boast that its trash incinerator is safe and does not affect human health is another dirty lie. Make no mistake, producing energy from refuse-derived fuel is a deadly undertaking, which has been going on in Minneapolis for 20 years now. We can be sure that residents of the city have been paying for it dearly with the undermining of their physical well-being. The county's claim that additional emissions from burning more trash would be negligible is a load of rubbish. Likewise, we are not impressed with the subservient MN PCA's assertion that the plant has exceeded its permit limits on only two occasions: Once in its early days, when too much mercury was escaping and again in 1999, when it was almost nine times over its limit for hydrogen chloride, a corrosive gas. It is not the just the occasional malfunction we need be concerned with. It is the steady routine emissions that are disgorged daily that are most perilous.

Among the toxins emitted by incinerators are dioxins, furans, PCBs, polyaromatic hydrocarbons (PAHs), and VOCs. Many of these substances are persistent, ubiquitous and bioaccumulative in living tissue. The airborne pollution that travels for miles and floats down to the ground remains in the soil and sediments of lakes and streams for years. It also lands on croplands

and pastures from where it works its way into our food. Incinerator toxins are carcinogenic and mutagenic and function as hormone disruptors in all species. When mixed in a poisonous cocktail, they interact with one another synergistically, having unpredictable and far-reaching effects upon the health of all Life in the biosphere.

Rubbish burners are the leading global source of dioxins and actually help to create more of them. By combining and combusting toxic materials such as plastics at high temperatures, dioxins, furans and other chlorinated organic compounds (COCs) become supertoxins. Through the process of burning, the amount of dioxin leaving an incinerator has been shown to exceed the amount entering as raw waste. Because of their ubiquity, there are already unacceptably high background levels in the environment. Elevated concentrations of dioxin have been found in the blood of people living near incinerators, when compared to the general population, and the contaminant is concentrated in the breast milk of nursing mothers. Dioxins are hormone disrupting compounds that affect fetal and early childhood development. They are gender benders that cause mal-formed reproductive organs, skewed sex ratios in human and animal populations and reproductive cancers later in life. Even the industry-tolerant EPA admits there are **no safe levels!** for this toxin.

There are other health hazards from the toxic mix expelled from garbage burners. Cancer clusters have also been found among residents living near incinerators. In France there was a 44% increase in soft tissue sarcoma and 27% increase in non-Hodgkin's lymphoma, and in Italy & the UK, studies show an increased incidence of cancer of the larynx. There is also a greater likelihood of childhood cancers striking down our young people. The liver, which is the organ that processes toxins in the body, is especially prone to the disease.

Damage to DNA can lead to birth defects among children whose mothers reside in proximity to rubbish burners and have high levels of ultra-fine particulate matter in their systems. It has been found that certain defects resulting from toxic exposures can be programmed into the body and passed from one generation to the next. Often times the DNA damage is so subtle it is not immediately detectable. They have found this to be true among lab animals that have inhaled air laden with particulate matter. If the materials being burned are radioactive such as medical radiology wastes, birth defects

can be shockingly high. Between 1990 to 2003, they tripled in two London boroughs. The rate of increase was 300% against the general background increase of 6%.

HEAVY METALS

Then there are the heavy metals given off through incineration, which liberates them into the air from their otherwise stable matrices. Among them are antimony, arsenic, chromium, cobalt, manganese, nickel, thallium, vanadium, cadmium, lead and mercury. You'll be interested to know that cadmium and lead multiply by 50 times the effects of mercury, which becomes gasified at high temperatures and evades filtering—the use of “activated carbon” notwithstanding. As you know, mercury is a neurotoxin that fosters attention deficit, hyperactivity and autism in our children. The fact that HERC already gives off 2,200 pounds of lead and 360 pounds of mercury per year and is demanding the privilege of releasing more is an absolute outrage!

NANOPARTICLES

The ultrafine particulate matter or nanoparticles that range in size between 1 and 100 nanometers are another serious health hazard from toxic incineration. They are released into the atmosphere when oil and solvent-based mixtures are burned. The amount of particulate matter in the air has risen astronomically within the last decade. Because of their extremely small size, nanoparticles are impossible to capture in pollution-control devices and are not even measured by the EPA. Microscopic particles entering the body through inhalation, ingestion and skin contact can be lethal to humans in many ways causing cancer, heart attack, stroke, asthma and pulmonary disease. Carried by prevailing winds, they travel long distances. When breathed in, nanoparticles penetrate deep into the lungs, enter the blood and are deposited in the tissues and organs of the body. They can deliver neurotoxic metals such as mercury directly into the brain. It is no wonder that neurodegenerative diseases such as Alzheimers and dementia are becoming epidemic in our elderly population.

Through inhalation, nanoparticles can damage brain cells in lab mice. Some common heavy-metal by-products from trash incineration that enter the body and damage the nervous system in this manner are manganese, nickel and thallium. Also found in particulate matter is titanium dioxide (TiO₂),

which is in a vast array of products that end up in the rubbish because of its broad-scale use as a pigment, element in enamels, component of electronics, chemical intermediate and catalyst in industrial processes, food colorant, UV-absorber in sunscreens, ingredient in personal-care items & pharmaceuticals, etc. For this reason, titanium dioxide is a common constituent of incinerator ash as well. It is considered a possible carcinogen and is only one example of the thousands of chemical compounds that are burned in RDF incinerators daily.

CHEMICALS IN WOOD WASTE

Another source of toxic emissions are wood wastes that are by no means “clean-burning”. If missed in visual sorting, which is often the case, wood contaminated with chromated copper arsenate (CCA), pesticides such as pentachlorophenol, preservatives like creosote, lead paint, black liquor, copper and chlorine will release dioxins, furans, lead and mercury when it is combusted.

INCINERATOR ASH AND SLAG

The waste stream does not end with combustion. The industry avowal that it is being reduced through incineration is another blatant falsehood. Your high school physics class taught you that matter is neither created nor destroyed, it is merely transformed. In this case, our incinerated refuse is turned into air pollution and solid and liquid residues. Thus, the waste never really goes away, and the stuff left over is just as contaminated as that belching out of the smokestack. For instance, 73% of the dioxins measured at a waste incinerator in Italy were found in the slag or solid residue. About 30% of what is burned ends up as bottom ash and is disposed of in landfills—proof that incineration does not eliminate the need for them. A further 5% ends up as fly ash, which has a fine consistency and has to be sealed into containers and disposed of as hazardous waste in “special” landfill sites. At least, that’s the case in Europe. The lime and carbon used to clean the filters are treated as toxic waste as well. Studies show that a significant percentage of dioxins released from incineration are also found in the scrubber wastewater or in the cake from the filters used to remove it from the air. Solid and liquid discharges that are deposited in landfills are not regulated by the EPA.

All landfills leak at some point and will eventually set the toxins free to leach into the soil and groundwater. Residents living around landfills with toxic ash risk breathing contaminated dust. Because bottom ash has a more gravel-like consistency, some of it is sold off and processed into aggregate for construction, road building and parking lot surfaces. Research indicates that heavy metals from these materials are leaching out and contaminating communities and ecosystems. In Britain, where mixed bottom and fly ash were spread on allotments and footpaths, they had one of the worst dioxin contaminations ever seen in a local area. Incinerator ash is **not** inert. Rather, it leaves a poisonous legacy that will affect future generations.

LAX STANDARDS

The EPA's standards are absurdly and dangerously lax and allow the incinerator industry to literally get away with murder. The agency's allowable levels for greenhouse and acid gases, chemical contaminants and heavy metals coming from trash burners are based on "the best available control technology". This is a load of malarkey. First, in order to maintain their profits, incinerator operators will squeak by with the bare minimum of controls and second, "the best technologies" are clearly inadequate for the task. There will always be contaminants released into the environment whenever anything is combusted no matter how many scrubbers, filters and electrostatic precipitators are employed. That is the nature of burning stuff. This is equally true for so-called state-of-the-art, emissions-free pyrolysis-gasification and plasma-arc technologies that are nothing but incineration dressed-up and have a history of one disaster across the globe after another. (For detailed horror stories

see: <http://www.greenaction.org/incinerators/documents/IncineratorsInDisguiseReportJune2006.pdf>)

In addition, the EPA's pathetically weak regulations, which are riddled with loopholes, are rarely, if at all, enforced beyond a slap on the wrist. Therefore, 3CTC maintains that **there are no safe levels** for any toxic by-products coming from trash burners. We demand that HERC and the Ramsey/Washington burners be shutdown immediately and call for a statewide ban on all incinerators.

ENVIRONMENTAL RACISM AND JUSTICE

The EPA's faulty standards for toxic emissions and exposures may be at levels acceptable to the industry and government, but they are not to the innocent victims of the pollution. To give one an idea of the magnitude of the exposure for many inner-city populations, the largest waste incinerator in the country is located in Detroit, which has an African-American majority population. The Motor City juggernaut is permitted to release 3.6 million pounds of "regulated toxins" per year, but only 50,000 pounds of these are classified as "hazardous". How do they figure? A new housing development stands next to the burner, and pity its poor residents! Detroit's asthma rates alone are three times the national average, and the rates for hospitalizations from asthma attacks are the highest in the ZIP codes clustered around the burner. Clearly, issues of environmental racism are a major concern when it comes to the location of incinerators.

In Minneapolis, the winds blow HERC's pollution northward and southward so it is the neighborhoods of the oppressed nationalities that are the most vulnerable to the health hazards. The federal government itself admits that there is enough pollution in Hennepin and Ramsey counties to cause 50 preventable deaths. That sad statistic is probably underestimated. For that reason, 3CTC believes that epidemiological studies should be conducted among residents of Downtown Minneapolis and the surrounding neighborhoods to determine the degree of harm that has actually been caused in the two decades that HERC has been operating. That is the first step in achieving environmental justice for people whose health has been damaged by the Hennepin County Garbage Burner.

THE CRIME OF WASTE IN THIS SOCIETY

There is nothing renewable about burning garbage since most of the materials that go into the waste stream come from finite resources that we can ill afford to continue squandering. A great deal of that comes from the Global South which is being plundered for its raw materials by giant transnationals so that Americans can buy cheap goods at Walmart and Target. Then there is the labor that goes into processing them, which is performed under conditions of near slavery at starvation wages. The workers of the Third World would be horrified at the amount of stuff we toss without the slightest hesitation. In many ways, it is disrespectful of their arduous labor, which comes to mean

nothing when we casually fritter away what they have produced by the sweat of their brow. The gross profligacy of which we are guilty not only shows a complete lack of regard for the labor they perform but points to our ingratitude to Mother Nature for Her bounty.

Further bulking up the waste stream is all of the ridiculous and unnecessary paper and plastic packaging designed to add value to the product in order to increase the manufacturer's profit margin. Tons of the stuff are burned daily all over the world. In order to keep the wheels of industry turning and the market economy thriving, capitalism has devised the devious strategy of planned obsolescence in which products are deliberately not designed to be repaired but to break down in a timely manner so they must be trashed and replaced. This is especially true of durable goods that by no means fit the definition. The mindless dictates of fashion, which demand that we update our wardrobes every season, contribute hugely to the problem since the textile industry is one of the most polluting on the planet. The advertising industry's manipulation of our wants and desires and its creation of false needs, which feed into the general discontent and dissatisfaction we feel because of our extreme alienation from Nature, set the whole process in motion. All the substandard crap that capitalist industry produces is an outrageous crime against the natural world. The productive process itself is wasteful since for every pound of junk coming off the assembly line, there are 75 pounds of waste that pile up outside the factory.

By burning things made of virgin materials, trash incineration is also an enormous misuse of energy. Combusting RDF requires three to five original units of energy to make one new unit of energy while recycling saves three to five times the energy that incineration squanders. For example, recycling office paper saves four times the energy generated by burning. Therefore, the label of "Resource Recovery" or whatever euphemisms the industry uses is a gross misnomer since incinerators as end-of-pipe interventions are horribly improvident. Plus, it is not economically sound because incineration provides only one polluting job for every ten green jobs in a composting or recycling facility.

Greenwashing trash incineration as renewable because of its seemingly endless source of feedstock only encourages more wasteful practices and ravenous consumerism. In fact, burning garbage is nothing but a license to engage in unbridled waste and extravagance. That is why, in keeping with

Nature's ways, 3CTC calls for a policy of Zero Waste by composting kitchen refuse and human and animal wastes and returning them to the soil as well as mulching crop residues and woody trimmings. In addition, we must reduce, restore, reuse and recycle at the point of production and glean materials from landfills. Doing so will cut down on our need to extract more raw materials through environmentally destructive mining operations that pollute our air, soil and water and poison the biosphere. These wise practices are absolutely essential if we are to provide for the needs of future generations. The throwaway society we live in must be abolished if there are to be any resources left for future generations.

NO MORE BURNING!

We must end all burning whether it is hydrocarbons, biomass, agrofuels or garbage to halt immediately the generation of greenhouse, ozone-depleting and acid gases, global-warming black carbon in the form of soot, toxic compounds and heavy metals. If we fail to do so soon, Life on this planet will not survive because it cannot tolerate any further assaults from industrial pollution. The biosphere is rapidly approaching its limits. The deterioration of human health and that of wildlife is to such a degree that the genetic integrity of the biosphere and its ability to reproduce and survive is now called into question especially with the effects of endocrine disruptors and mimics. Our intelligence and mental capacities are declining overall because of learning disabilities, hyperactivity, attention deficit and autism, which are becoming widespread among our children, and dementia and other neurodegenerative problems, which are growing among our elderly. The heavy chemical body burden now found even in fetuses and newborns is due in part to the toxins released from smokestacks and exhaust pipes.

Here is an example of how vulnerable human beings in the advanced nations have become. Exposure to contaminants has ignited an autoimmune epidemic that affects 23.5 million Americans. That figure is expected to triple over the next few decades. There are now 100 ailments that have been identified as auto-immune diseases in which the immune system takes a destructive turn toward the body's own organs and tissues. Once a person reaches a critical threshold and is subjected to yet one more toxic exposure, his or her immune system can be pushed over the edge onto the path of self-destruction. Exposure to contaminants from refuse-derived fuel burning is the

very thing that can propel someone into a severe health crisis that makes them unfit to work or meet the daily challenges of living and from which it is extremely difficult to recover. Some people are plagued by more than one autoimmune disease, adding to their misery and crippling their ability to function. This situation has been well documented by Donna Jackson Nakazawa in her book *The Autoimmune Epidemic: Bodies Gone Haywire in a World Out of Balance*. The author herself has had paralyzing bouts with Guillain-Barre Syndrome (GBS).

CLEAN, RENEWABLE ENERGY NOW!

Time is running out in more ways than one, and garbage burning is contributing to the problem. Greenhouse gas emissions from all sources are increasing rather than declining because the rich, who run the global economy and who will not let go of their hydrocarbon-based empire, are determined to wrest the last barrel of oil, tank of natural gas and boxcar of coal from the ground and incinerate us all into oblivion in one final blaze of excess. Their toadying politicians continue to diddle their fiddles as the planet burns, endlessly stalling instead of instituting the drastic measures required to enable us to adapt to the ever-accelerating pace of climate change. In the meantime, carbon dioxide concentrations are climbing the chart, and global temperatures are rising. Earth's ice masses are melting away at an ever increasing pace as positive feedbacks race the climate system toward dangerous tipping points. Oceans are acidifying to the detriment of marine life. There are enormous regime shifts taking place among species with some succeeding in their adaption strategies and others failing and passing forever into the silence of extinction. Drought, wildfire, flooding and disease continue to plague various regions of the world, bringing suffering and death to millions of people. We face a crisis of planetary proportions that worsens daily, and nothing short of emergency measures will solve the problem--going cold turkey and weaning our society completely off of fossil fuels. We must drawdown carbon to a safe 300-325 ppm CO₂e in order to stabilize the climate and prevent catastrophe by achieving **ZERO GREENHOUSE GAS EMISISIONS FROM ALL SOURCES A.S.A.P.** Our only choice is to adopt a crash program of renewable wind and solar energy combined with clean mass transit powered by the same means and do it immediately. We must make peace and end the war on Nature for the sake of our children and theirs. This

is our only way of ensuring that they will be able to live a relatively decent life in future.

3CTC challenges the members of the Minneapolis City Council's Zoning and Planning Committee to say "NO" when the time comes to Covanta Energy's request to incinerate more trash. It must do so for the sake of the planet and all life on it.