January 20, 2016

Environmental Protection Agency
EPA Docket Center (EPA/DC), Mailcode 28221T
Attention Docket ID No. OAR-2015-0199
1200 Pennsylvania Avenue, NW.
Washington, DC 20460

Submitted via email to A-and-R-Docket@epa.gov

Global Alliance for Incinerator Alternatives comments concerning the proposed Federal Implementation Plan and model trading rules for the Clean Power Plan, Docket ID No. EPA-HQ-OAR-2015-0199

Thank you for the opportunity to submit comments concerning the proposed Federal Implementation Plan (FIP) and model trading rules for the Clean Power Plan (CPP). The Global Alliance for Incinerator Alternatives (GAIA) is an organization that is committed to reducing climate change, and ensuring environmental justice communities are protected from toxic pollution.

GAIA is a worldwide alliance of non-profit organizations and individuals who work to promote and assist in the shaping of: environmental justice in communities around the world; local environmentally sustainable economies; and creative zero waste solutions. We recognize that our planet's finite resources, fragile biosphere and the health of people and other living beings are endangered by polluting production and disposal practices. GAIA envisions a just, toxic-free world without incineration—a world in which no resources and no community is treated as disposable.

Upon review, we call on the EPA to include the following components in the final Federal Implementation Plan for the CPP:

- The exclusion of all waste incineration (also called "waste to energy") and biomass incineration from the final FIP and model trading rules, to protect the climate and public health, and to comply with the agency's environmental justice-related obligations under Executive Order 12898.
- A robust environmental justice analysis, including clear community engagement strategies, for states for which EPA will issue a FIP.

It is vital for the United States to end the use of coal and other polluting energy sources, and move towards energy sources that do not create climate or toxic pollution. As the country moves in that direction, it is important to avoid expanded burning of waste and biomass for energy

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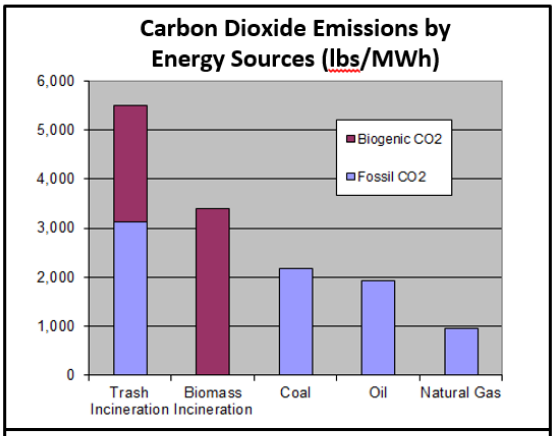
Burning waste is more polluting than burning coal, per unit of energy

Carbon dioxide: According to the EPA's own database,[1] burning municipal waste is the most carbon intensive form of energy generation, producing over twice the amount of CO2 per unit of energy than coal plants. Figure 1 on the right depicts the non-biogenic (in blue) and biogenic emissions from trash incineration, the latter of which EPA proposes to allow for compliance under the rate-based model trading rule, as if it were carbon-neutral. The carbon intensity of waste incineration has been corroborated by recent studies comparing the emissions of waste incinerators and coal plants in Maryland[2] and New York.[3]

Fig. 1



Source: U.S. EPA, 2010 (Energy Justice Network)

Toxic pollution: Per unit of energy, waste incineration emits higher levels of mercury, dioxin, lead, carbon monoxide, nitrogen oxide, and sulfur dioxide than coal-fired power plants. These co-pollutants are harmful to public health.

Figure 2 below provides information on the carbon and toxic pollutants emitted by waste incineration facilities and coal plants in Maryland. This chart shows that, per unit of energy, burning trash emits 20 times more mercury and lead, and 5 times more nitrogen oxide than coal plants. This is in addition to greenhouse gas (GHG) emissions twice the quantity of GHGs from coal plants, per unit of energy.

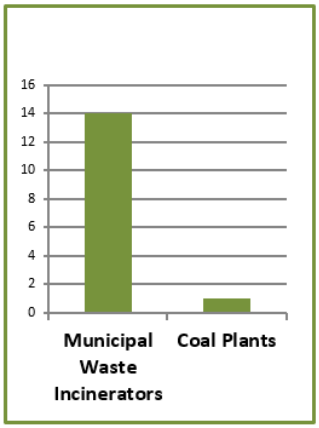
Figure 3 below shows that New York State's waste incinerators emit a ratio of 14 times more mercury than the state's coal plants, per unit of energy. The same study by the New York Department of Conservation also found that incinerators in New York state emitted more mercury total than the state's coal power plants.

Fig. 2

Facility		Average Toxic Emissions Per Year			GHG (lbs/MWh)
Waste Incinerators	Electricity Generating Capacity (Megawatts)	Lead (lbs)	Mercury (lbs)	NOx (Tons)	CO_2
Wheelabrator Baltimore	65	275	68	1,099	3,492
MCRRF	68	130	46	765	4,537
Coal-Fired Power Plants					
Ft. SmallWood	2429	11	80	5,246	2029
Chalkpoint	2563	180	20	4,483	2116

Source: Environmental Integrity Project: *Waste-To-Energy: Dirtying Maryland's Air by Seeking a Quick Fix on Renewable Energy?* October 2011.

Fig. 3



Source: NY Department of Conservation, Comments to New York State Public Service Commission, August 19, 2011.

[1] EPA eGRID 2010 Emissions Data for U.S. Electric Power Plants: www.energyjustice.net/egrid

[2] Waste-to-Energy Incinerators Pollute More Per of Hour of Energy than Coal-Fired Power Plants and Are Not Renewable: environmentalintegrity.org/archives/6709

[3] NY Department of Conservation, Comments to New York State Public Service Commission in the Matter of the application of Covanta Energy Corporation, August 19, 2011.

Waste incineration is a highly polluting and toxic energy generation option. When compared to clean energy sources such as solar and wind energy, incinerator pollution is even worse. With a wealth of truly renewable options for electricity generation, any policy that allows compliance from sources that release high amounts of carbon dioxide and other toxic emissions into the air is a mistake.

Alternatives to waste burning contribute to clean air

Energy conservation through recycling is critical to reducing GHG emissions. Although incineration is often called "waste to energy," in reality burning municipal solid waste (MSW) is a waste of energy. Much more energy can be saved (and notably, greenhouse gas emissions can be avoided) by recycling and composting the components of MSW, rather than burning it.

Composting is critical to reducing GHG emissions. Food scraps, yard waste and other organic materials create methane in landfills when these materials decompose without oxygen. Developing the nation's compost markets is a critical strategy that the EPA should encourage. Indeed, in the final Clean Power Plan EPA stated that the agency will reject as qualified biomass any waste-to-energy component of state plans if those states do not document their efforts regarding waste reduction, reuse, recycling, and composting programs. EPA now proposes to allow waste-to-energy for compliance under the rate-based model trading rules, but has omitted this key element. Additionally, there is growing science that shows that applying compost to land results in long term carbon sequestration in the soil,[4] as well as builds soils that are more resilient to flooding and drought, and more productive.

Biogenic carbon accounting undercounts true greenhouse gas emissions

The amount of CO2 in the atmosphere has reached historic proportions, with levels hitting 400 PPM[5]. Given the critical situation that the climate is in we must reduce overall CO2 emissions, no matter the source, before it is too late to reverse climate change.

We strongly disagree with EPA's conclusion that "biogenic" CO2 does not contribute to climate change impacts, in the way that any other CO2 molecule impacts the climate. Calling biomass and the biogenic portion of waste "renewable energy" allows states to meet their climate commitments on paper, without achieving real greenhouse gas emissions reductions. By allowing power plants to co-fire MSW and waste-derived fuels, the EPA is sending a clear signal to states and energy companies that they can access a free pass for increases in climate and toxic pollution, by substituting a portion of their fossil fuels with such materials.

Such exemptions for power plants fly in the face of recommendations made by over 90 scientists in a July 14, 2014 letter,[6] which stated "only when bioenergy results in additional

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[4] Marin Carbon Project references studies at marincarbonproject.org/marin-carbon-project-science including:
- Marcia S. DeLonge, Rebecca Ryals, Whendee L. Silver. A Lifecycle Model to Evaluate Carbon Sequestration Potential and Greenhouse Gas Dynamics of Managed Grasslands, *Ecosystems*, 2013, Page 1.
- Marcia S. DeLonge, Justine J. Owen, Whendee L. Silver, Greenhouse Gas Mitigation Opportunities in California Agriculture, Duke Nicholas Institute for Environmental Policy Solutions. February 2014.

[5] ESRL Global Monitoring Division - Global Greenhouse Gas Reference Network, December 2015. Retrieved January 5, 2016, from http://www.esrl.noaa.gov/gmd/ccgg/trends/weekly.html

[6] Letter to Joe Goffman, Senior Counsel, EPA Office of Air and Radiation: www.caryinstitute.org/sites/default/files/public/downloads/news/2014_06_epa_biomass_carbon.pdf

carbon being sequestered above and beyond the anticipated baseline can there be a justification for concluding that such energy use results in little or no increase in carbon emissions." It is unlikely that carbon emissions from biomass and waste-to-energy facilities will be offset within the timeframe of the Clean Power Plan.

Excessively expensive approach robs real renewable energy of support

Incinerators are the most expensive form of energy generation in the U.S. The capital costs are twice that of coal-fired power plants, and 60% higher than nuclear. Waste incinerator operations and maintenance costs are ten times greater than coal and four times greater than nuclear.[7] Often costing upwards of half a billion dollars to build, many incinerators have also required hundreds of millions of additional spending on upgrades for the latest pollution control technologies. This high cost of incineration is not only a burden on taxpayers, but also diverts valuable funds from clean, renewable energy projects such as wind and solar.

Waste burning has environmental justice implications

Many so-called "waste to energy" incinerators are sited in communities of color and low-income communities in the United States. Incentivizing any form of combustion energy, whether it be coal, gas, trash, or biomass, raises serious concerns about increased public health impacts, especially in these communities already overburdened by such industrial pollution. **Unless the FIP excludes all combustion at municipal solid waste incinerators (including the biogenic portion) from compliance, we are gravely concerned that the Clean Power Plan will result in an increase of adverse health consequences and related economic burdens for the communities of color and low-income communities living near such facilities.** As Dr. Robert Bullard noted in his 2011 article "Dismantling Energy Apartheid in the United States," "burning biomass to generate electricity…. is neither green nor clean."[8]

In addition to waste burning, it is important that the EPA prioritize overall environmental justice and the reduction of pollution burden in communities disproportionately impacted. As the final Federal Implementation Plan will be the backup plan for states with no or unacceptable plans, it is the EPA's responsibility to ensure that the FIPs for those states comply with Executive Order 12898, which requires federal agencies to identify and address any disproportionate impacts from their actions on minority, low-income, and indigenous populations.

EPA must undertake a robust environmental justice FIP analysis and community engagement process

The final FIP must include a robust analysis of the impacts -both positive and negative- on communities of color and low-income communities in those states for which EPA issues a FIP, in particular to the extent that EPA decided to allow MSW for compliance under the FIP, against our recommendations. EPA must also undertake a robust community engagement and public comment process, and must require that Clean Power Plan Coordinators in the relevant EPA Regional Office's be consulted on the community engagement processes. The final FIP must also include an enforceable deadline for completion of EPA's proposed assessment of local air quality impacts, and for completion of any actions needed to address any such impacts.

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[7] U.S. Energy Information Administration (Department of Energy), Updated Capital Cost Estimates for Electricity Generation Plants, November 2010. http://www.eia.gov/oiaf/beck_plantcosts/pdf/updatedplantcosts.pdf

[8] Dr. Robert Bullard, "Dismantling Energy Apartheid in the United States," *Dissident Voice*, 2011. www.dissidentvoice.org/2011/02/dismantling-energy-apartheid-in-the-united-states/

Response to request for comments on EM&V Requirements for "Waste-to-Energy" incinerators

In the case that EPA goes against our recommendations and decides to allow MSW incineration as compliance in the FIP, we provide the following comments responding to questions raised in the draft FIP.

The draft FIP Waste-to-Energy EM&V Requirements section states on page 41:

> *As discussed in the final EGs (see section VIII.K.1 of the final EGs), only the portion of electric generation at a waste-to-energy facility that is due to the biogenic content of the MSW may be used to generate ERCs or counted by a state towards its achievement of its obligations pursuant to this regulation.*

This section asks for feedback on the following:

> *The EPA requests comment on all metering, measurement, verification, and other requirements included in this subsection with respect to waste-to-energy, including the appropriateness of their use for waste-to-energy.*

While we disagree strongly with EPA's conclusion that "biogenic" carbon does not contribute to climate change, if EPA does pursue this pathway despite our arguments against adopting this approach, then steps must be taken to verify the veracity of CO2 emissions claimed by facility operators and states.

If this pathway is pursued, it would be critical that "waste to energy" incinerator facilities be required to perform waste audits on a monthly basis to verify the portion of waste that EPA would consider to be generating "biogenic" CO2 when burned. This information should be reported to the EPA, and made available to the public.

Without rigorous examination, states could both undercount CO2 from burning plastics and other fossil fuels, while overcounting "biogenic" CO2. The dangers of such a situation were illustrated in Denmark, where a 2011 study found that Denmark was underestimating the amount of plastic being burned in incinerators, thus underestimating the amount of CO2 of fossil-origin coming out of its incinerators. As a result, the study determined that Denmark had been dramatically undercounting the country's GHGs due to waste incinerator emissions.[9]

Thank you for this opportunity to submit comment, and if you have any additional questions please feel free to contact me at ahmina@no-burn.org with any questions.

Sincerely,

Ahmina Maxey
US & Canada Campaigns & Membership Coordinator

[9] *Copenhagen Post*, "Denmark's Carbon Bomb," April 8, 2011. http://cphpost.dk/news14/scitech/denmarks-carbon-bomb.html