Via Email:

Mayor Kenney

May 2, 2019

Re: Philadelphia Waste Contracts

Dear Mayor Kenney:

On behalf of our American Sustainable Business Council, we are writing to you concerning your Streets Department's current consideration of new contracts for where Philadelphia's trash will go for the next seven years. We write to urge you to instruct your Streets Department **NOT** to award any contracts for burning trash in incinerators or to market trash as "fuel" to be burned in industrial facilities like cement kilns. Under the current contracts, Philadelphia has been sending trash to three incinerators that are the largest air polluters in Chester City, Montgomery County, and Bucks County.[1] Through the trash and recycling contracts with Waste Management, additional waste is sent to be burned as fuel in cement kilns that are the largest air polluters in Pennsylvania's Lehigh Valley.

There is no good business case for incineration. Burning trash costs the most, contributes to excessive pollution that raises health costs to the public, destroys valuable resources, and produces the fewest jobs.

<u>Incineration costs the most</u>

The trash incineration industry markets themselves as "energy from waste" or "waste-to-energy" as if they're primarily power plants. However, the U.S. Energy Information Administration's data shows that trash incineration is, by far, the most expensive way to produce electricity.[2] No one builds trash incinerators to produce energy. They are primarily waste disposal facilities with energy generation as a "secondary function," as the industry has admitted on the record.[3]

Compared to landfilling, trash incineration (which includes the need to landfill incinerator ash) is more expensive. This has been affirmed by two national waste industry trade associations,

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[1] National Emissions Inventory, U.S. Environmental Protection Agency. www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data

[2] "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 See data summarized in Attachment A.

[3] Ted Michaels, President, Energy Recovery Council, March 18, 2013 testimony before Washington, DC City Council. In response to charges that trash incineration is more air polluting than coal power plants, dodged the comparison to other energy facilities, stating that "a waste-to-energy plant is designed to manage solid waste... the electricity output is a secondary function." See video of the hearing before the Committee on Transportation and the Environment at 1:46, here: http://dc.granicus.com/MediaPlayer.php?view_id=29&clip_id=1662

including the trash incinerator industry's own trade association.[4] It's also been found in numerous bids, including all 14 bids where Washington, DC last compared incineration at a nearby large Covanta incinerator (similar to Philadelphia's situation) to hauling trash 2-4 times as far to Virginia landfills (Philadelphia has closer landfill options).[5]

More costly disposal impacts Philadelphia businesses.

If Covanta is managing to bid cheaper than Pennsylvania landfills, it must be because they operate the nation's largest incinerator in Chester City which operates without two of the four air pollution control devices common to incinerators.[6] Their economy of scale combined with not paying for expensive pollution controls may enable them to bid more cheaply, but put the costs onto Philadelphia area residents in the form of medical bills and lost work and therefor damage to the Philadelphia economy.

Health Care Costs

Philadelphia alone experiences asthma costs of an estimated $1 billion per year, not to mention cancer and other diseases associated with incinerator pollution.[7]

Looking just at the health damage associated with Philadelphia's use of trash incineration, we find that the city's use of incineration contributes to public health costs far in excess of the city's waste disposal budget.

A 2017 study from the New York University School of Medicine found that just one pollutant (fine particulate matter) from the trash incinerator in Baltimore is causing $55 million in annual health costs to residents in several states including Pennsylvania.[8] Fine particulate matter (PM2.5) is associated with premature death, heart disease, chronic bronchitis, and other respiratory distress.

The three Pennsylvania trash incinerators surrounding Philadelphia release 7 times as much fine particulate matter as the Baltimore trash incinerator.[9] The pollution from these three incinerators contributes to well over $400 million in annual health costs to the region, and probably much more considering the much larger population compared to Baltimore. Since Philadelphia is

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[4] National Solid Waste Management Association, 2005 Tip Fee Survey. www.watersmartenvironmental.com/tipping_fee_bulletin_2005.pdf Also, in Ted Michaels' testimony (*Id.*), where he stated: "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-intense 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." See video (*Id.*) at 1:44.

[5] Statements by Department of Public Works Director to Washington, DC City Council and in email to the DC Office of the Mayor, from FOIA production: www.energyjustice.net/files/dc/Howland-incineration-more-expensive.pdf

[6] U.S. Environmental Protection Agency 2009 regional inspector report and data from Energy Recovery Council 2010 industry directory, available from www.ejnet.org/chester/pollutioncontrol.html. Pollution control equipment verified in more recent data from U.S. Energy Information Administration's 2017 Form 860 database: www.eia.gov/electricity/data/eia860/

[7] Energy Justice Network testimony before DC City Council, December 12, 2018 Hearing on Health Disparities. www.energyjustice.net/files/pa/philly/2018-12-12testimony.pdf Based on Asthma and Allergy Foundation of America, *Asthma Capitals 2018*. www.aafa.org/media/2119/aafa-2018-asthma-capitals-report.pdf and PA Department of Health asthma data, summarized in chart at www.ejnet.org/chester/asthma.html

[8] Written Report of George D. Thurston Regarding the Public Health Impacts of Air Emissions from the Wheelabrator Facility, Nov. 20, 2017. www.cbf.org/document-library/cbf-reports/thurston-wheelabrator-health-impacts-2017.pdf

[9] National Emissions Inventory, U.S. Environmental Protection Agency. www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data

responsible for 22% of the waste burned at these facilities,[10] Philadelphia's share of that pollution causes at least $100 million in annual health costs just from this one pollutant.

Incineration destroys valuable resources

So-called "waste-to-energy" facilities (trash incinerators) do not turn waste into energy. That would violate the laws of physics. They literally turn discarded materials into toxic air pollution and toxic ash. For every 100 tons burned, 70 tons become air pollution and 30 tons become toxic ash that is sent to landfills for disposal, doing more health and environmental harm than if the waste were landfilled directly.

There are many valuable commodities in trash that could be reused, recycled, and/or composted. Actually recycling and composting the materials in trash would save 3-5 times more energy than incineration can "create" by recovering a small portion of the energy that went into making the products from raw materials.[11]

The proper public policies could ensure greater recovery of these materials. One study estimated that over $11 billion in valuable materials are still discarded in landfills and incinerators each year in the U.S.[12] Half of the value is in the 5% that is reusable.[13] Much of the rest can be recycled or composted if the city created the proper incentives to keep these materials out of the waste stream.

Philadelphia's "Zero Waste and Litter Action Plan" looks nothing like actual Zero Waste plans developed by Zero Waste professionals for cities like Austin, TX[14] or numerous communities on the west coast. The city's plan fails to even include the most effective, and cost-effective, way to quickly cut waste nearly in half – a policy known as unit pricing, or paying per bag of trash.[15] Some call it "pay as you throw" or "save as you throw." 10,000 communities in the U.S. now use this policy and New York City, Baltimore, and Washington, DC are all evaluating doing it as well. On average, pretty much immediately once adopted, communities see an average 44% reduction in the amount of waste sent to disposal. This include waste reduction and reuse, since the amount of waste plus recycling/composting has also been found to be reduced by 28%, so that cost isn't all shifted to recycling, but there are savings that accrue from waste reduction and reuse. Philadelphia would be wise to hire experienced Zero Waste professionals who can come up with a Zero Waste Plan that has the ability to reach the 90% waste reduction goal in the city's plan, without incineration. Zero Waste is defined as zero incineration and at least a 90% reduction of waste going to landfills.[16]

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[10] Pennsylvania Department of Environmental Protection Division of Reporting and Fees data.

[11] Morris, Jeffrey, and Canzoneri, Diana, "Recycling Versus Incineration: An Energy Conservation Analysis," Sound Resource Management Group (SRMG) Seattle, Journal of Hazardous Materials, Vol 47, Issues 1-3, pp. 277–293 (1996). www.sciencedirect.com/science/article/pii/0304389495001166

[12] As You Sow, "Unfinished Business: The Case for Extended Producer Responsibility," 2012 Report. www.asyousow.org/reports/unfinished-business-the-case-for-extended-producer-responsibility-for-post-consumer-packaging

[13] Dan Knapp, Urban Ore, Berkeley, CA. www.urbanore.com

[14] www.austintexas.gov/zerowaste

[15] See two "Pay as You Throw" presentations at the bottom of the Montgomery County, MD Aiming for Zero Waste page, for recent presentations by two experts on the topic: www.montgomerycountymd.gov/SWS/master-plan.html

[16] See www.zwia.org/standards/zw-definition/ and www.zwia.org/zwh/ for the official definitions used internationally for green business certification (http://true.gbci.org). The City of Baltimore unanimously voted in 2018 to support the Zero Waste Hierarchy to guide the city's transition away from incineration. See the 4th resolution listed at www.cleanairbmore.org/wp-content/uploads/2018/11/Resolutions.pdf

Incineration produces the fewest jobs

Research by the Institute for Local Self-Reliance shows that composting and recycling creates 5-10 times as many jobs as incineration or landfilling. Reuse and repair jobs can create far more – as much as 300 times as many jobs in electronics reuse.[17]

Achieving a 75 percent diversion rate for municipal solid waste (MSW) and construction and demolition debris (C&D) by 2030 will result in creation of 2.3 million jobs nationwide. For Philadelphia, this would mean over 11,000 new jobs.[18]

A comparison of jobs provided in incineration vs. landfills shows that landfills provide about 80% more jobs per ton of waste as incineration does.[19]

It's clear to us that, both environmentally and economically, incineration is the worst of the options for managing trash. While on the path to Zero Waste, there are less damaging ways to manage "leftover" discarded materials.[20] Landfilling is less damaging than burning and dumping ash in landfills, and there are ways to minimize the impacts on landfills, especially by getting food scraps and yard waste into aerobic composting.

Please do not make the mistake of continuing to contract for any of Philadelphia's waste to be put up in smoke. Philadelphia has suffered enough embarrassment from having sent half of its recyclables to incinerators. Let's not keep compounding the problem by continuing to burn the city's trash. We can and should turn waste into wealth through an ambitious zero waste plan that values smarter design, reuse, recycling, and composting.

We stand ready to work side by side with you to advance efforts to reduce environmental impact as we create good jobs for a sustainable economy.

Sincerely,

David Levine

David Levine, President

Cc: Philadelphia City Council

The American Sustainable Business Council (ASBC) is a growing coalition of business organizations and companies committed to advancing market solutions and policies that support a vibrant, just and sustainable economy. ASBC informs and engages business leaders, while educating decision makers and the media about opportunities and policies that can lead to a more sustainable economy. Founded in 2009, today, the organizations that have joined in this partnership represent over 200,000 businesses and work to create jobs, grow business and build a sustainable US economy. www.asbcouncil.org

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[17] "Recycling Means Business," Institute for Local Self-Reliance. www.ilsr.org/recycling-means-business/
[18] "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.," Tellus Institute. www.tellus.org/tellus/publication/more-jobs-less-pollution-growing-the-recycling-economy-in-the-u-s
[19] "Pay Dirt," Institute for Local Self-Reliance. www.ilsr.org/composting-sense-tables/
[20] "What is the best disposal option for the 'Leftovers' on the way to Zero Waste?" Ecocycle report by Dr. Jeffrey Morris. www.ecocycle.org/specialreports/leftovers