



NEWSLETTER, JUNE 2020

Featured article:

Covid19 Heroes

There are millions of frontline heroes that are helping us through the pandemic; doctors, nurses, police, firemen, and EMTs. However, there is another branch of unsung heroes who encounter waste that has the potential for being contaminated with components of the virus. These are our sanitation workers; the people who pick up our garbage, workers at incinerators, recycling and waste-to-energy plants, and operators at landfills. People who have the virus and are confined to their homes put their waste out for disposal. Virus contaminated waste may be put out on the curb for collection or flushed into the sewer system. In addition, let us not forget the operators of our wastewater and sewage treatment plants. They also treat our waste.

The American Society of Mechanical Engineers' (ASME) Material & Energy Recovery Division and the Research Committee on Energy, Environment, and Waste work with these heroes and what to thank the thousands of heroes who are getting us through the pandemic without significant recognition.

Comment on CBS news about COVID19 being emitted from industrial processes

Comment by J. Clark: In a well operated waste to energy facility (all of them!) the tipping floor is under a negative pressure, pulling air into the tipping hall to use as combustion air in the boilers. In the boilers, any contaminated materials in the waste, as well as any viruses on the particulates, is subjected to temperatures in excess of 1800 degrees and destroyed. Combustion control system and Air pollution control equipment continuously maintain low emissions from waste to energy facilities. Operator in the loaders and crane cabs on the tipping floors are in enclosures with air filtrations systems. The wte facilities continue to operate through this time with the double duty of also producing the electrical needs of those at home. Fun fact – with each individual responsible for 0.75 tons of trash per year, processing a year's worth of waste generated by a family of 4 in a waste to energy facility, safely reduces the volume waste by over 90%, (removes any harmful bacteria) and produces enough power to supply that home with electricity for about 2 months!

Comment by N.J Themelis: the PM of WTE plants has gone through 900°C so no virus or other pathogen can survive it. Any worker on the loading floor should wear a mask and other protective equipment, even at virus free times. As you know, the air sucked from the building housing the loading floor and the bunker is used as combustion air in the WTE so any virus in it will be destroyed in the furnace. The WTE furnace is the best destination for the large volumes of hospital wastes generated during these bad times.

Upcoming events:

2020 WTERT Biennial Conference Sustainable Waste Management: The Forefront of Innovation October 22nd & 23rd, 2020 at CCNY

**Abstract Submission
Deadline Approaching
June 14**

**Please send abstracts to
eec2020@eeconferences.com**

Abstract Topics:

- Thermal conversion technologies
- Operations
- Metal recovery
- Improvements
- And many more...

**Please visit CCNYEEC.com for more
information**



Hosted by:



**Earth Engineering Center
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In Collaboration with:



**Material &
Energy Recovery
Division**

**The City College
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The Grove School of Engineering



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Interesting items:

EPA Provides Recommendations on Disposal of PPE. EPA is asking Americans to recycle materials from their homes and properly dispose of personal protective equipment (PPE). EPA is asking households to recycle more and correctly, as well as disposing of PPE securely in trash cans and following local guidelines.

Learn more:

- [EPA Administrator Wheeler's video message](#)
- [Don't Recycle Personal Protective Equipment video](#)
- [Recycling During the Health Crisis video](#)
- [EPA's Recycling During COVID-19 web page](#)

[Center for Disease Control Coronavirus web page](#)

CEWEP: Waste Incineration Safely Destroys Viruses at High Temperature. The Confederation of European Waste to Energy Plants (CEWEP) has welcomed the recognition of waste management as a sector providing an essential service and emphasized the ability of incineration to safely destroy viruses and pathogens. Further reading [here](#).

WTE Projects Not Immune from COVID-19. In a report on the WTE industry, analysts are pointing out that the pandemic will likely affect contractual project development and construction timelines and reduce the generation of waste feedstocks in the long run. Further reading [here](#).

Interview of Covanta CEO Stephen Jones on waste management during the coronavirus crisis. Key points included the communal necessity of WTE facilities while residential waste continues to increase; Feedstock has remained consistent during the pandemic but has seen tip fees slightly decrease. Watch the interview [here](#).

Report Shows Reducing Food Waste Can Help Climate. The group recommended bolstering and improving waste-to-energy practices as well, citing that waste should be viewed as a resource. Report available at [2020 Drawdown Review](#).

European Environment Agency (EEA) Releases Report on Citizen Science Air Monitoring. It explains how low-cost devices to measure local air pollution levels work and highlights the potential for impact. Also, it provides a non-technical summary of the types of options and tools available for citizens to measure local air quality. Link of report [here](#).

Plastics Recyclers Europe publish guiding requirements on recycling input characterization. Recycling input characterization guiding requirements specify the main properties that define the type, origins and characteristics of the sorted waste, levels of impurities, means of transportation and supplier information. The guidelines can be found [here](#).

Recent developments:

A Keppel-led consortium has received the Letter of Acceptance from Singapore's National Environment Agency for an EPC contract worth more than \$1.5bn for the development of a waste-to-energy plant and a materials recovery facility at Singapore's new Tuas Nexus IWMF1. [Link](#).

Vienna, Austria---Home to 4 WTE Plants---Named Greenest City. Vienna is named the greenest among the 50 most visited cities, according to the study evaluating green and sustainable solutions. Considerations included renewable energy sources, waste management, air pollution, public transportation, water consumption, walkability, and parks. _The city includes four WTE facilities, including the recently renovated Spittelau plant. Further reading [here](#).

BlackRock Raises \$5.1 Billion for Global Energy & Power Infrastructure Fund III. The investments are diversified geographically and by energy sub-sectors, which primarily consist of 1) the power sector, including electric power generated from renewable sources such as WTE, solar, wind, and hydro, as well as natural gas, while excluding coal-generated power, 2) the midstream sector, including energy-transportation and storage, and 3) the utility sector. For additional information please visit [here](#).

EPA Wins Suit on Plan to Limit WTE Emissions. In a unanimous opinion issued April 17th, a three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit in *Sierra Club v. Andrew Wheeler* upheld a lower court's ruling that found the EPA did not violate the Clean Air Act by failing to issue federal plans for implementing the industrial incinerator air standards in states that failed to craft compliance plans. Read the Opinion: <https://casetext.com/case/sierra-club-v-wheeler-2>

CCS Pilot Phase Successfully Completed. Fortum Oslo Varme's Klemetsrud waste-to-energy (WTE) plant has successfully validated carbon capture technology at its pilot plant. The move is part of Norway's planned full-scale carbon capture and storage project known as Northern Lights. At full-scale the plant will capture 400,000 tons of CO₂ annually, approximately 90% of total CO₂ emissions. For More Information see [here](#).

Pasco County to Expand WTE Facility. Pasco County Commissioners began negotiations with Covanta Pasco to design and build a new and expanded WTE facility. The county has a goal of using a maximum price tag of \$525 million for designing, building, and operating a new facility. The new facility will allow for an additional 550 tons per day of capacity, in addition to the 950 tons currently processed. Covanta has operated the county's current facility since 1991 and has a current contract through 2024. Further reading [here](#).

Israel Promotes Waste-to-Energy Plants. The Environmental Protection Ministry has devised a ten-year plan to and aims to recycle half the country's waste and use another 23 percent for energy production. The cost of building three power plants is estimated at 4 billion shekels (\$1.14 billion). Each facility will handle 1,000 to 1,500 tons of waste a day – about half the waste produced in the Tel Aviv metropolitan

area. The ministry estimates that nine such facilities should be built by 2040 to meet Israel's needs. Further reading [here](#).

Potential for WTE in Victoria. Infrastructure Victoria released a proposal for the Australian state to recover up to 90 percent of its waste through waste-to-energy and increased recycling. The proposal includes upgrading public and private sectors and building 87 new processing plants for processing organics, WTE, and recycling to reach 90% by 2039. Further reading [here](#).

ASME-MER Scholarship winners

Anna Naumova

City College of New York, BS in Mechanical Engineering. Date of Graduation: Spring 2021.

Research subject: Processes that convert plastic materials to fuels.

Komal Charania

NC State University, MSc in Environmental Engineering. Date of Graduation: May 2021.

Research subject: Estimating the elevated temperatures of landfills.

Yegor Nikitin

City College of New York, PhD in Chemical Engineering. Date of Graduation: May 2022.

Research subject: Corrosion in Waste to Energy (WtE) processes.

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The Materials & Energy Recovery Division Chairman's Message, published in September 2019 can be found [here](#). For further information, visit our [website](#).