

Sustainable Materials Management to Protect Tomorrow

# COVANTA

Covanta Camden AO 2021-25 Public Hearing

December 8, 2022



# Virtual Public Hearing Ground Rules

The following ground rules will be followed in order to allow for a productive meeting and are in line with best practices for virtual public hearings and meetings.

- The meeting will be recorded and shared with the NJDEP and become part of the official public record relevant to the project.
- At the beginning of the meeting, Covanta will make a brief presentation about the Camden WTE Facility and the Green Initiative Project and the associated Title V and Solid Waste Permit modification applications as well as the Title V renewal application.
- All participants will be muted during the presentation but will be able to submit questions via the Q&A feature of the webinar or by raising their hand. Commenters will be called upon and unmuted in the order in which they raise their hands in the Zoom platform or submit their questions via the Q&A feature.
- The speaker's mic will be re-muted once they have finished asking their question or making their comment, or at conclusion of the designated time allotment. Should they run out of time, they may submit additional comments in writing or return to the commenters queue.
- Attendees will be asked to state their name, address, and affiliation, if any, for the record prior to their comments or questions.
- Questions/Comments will be limited to 3 minutes for each attendee, in order to provide adequate time for all. Written comments and questions may also be sent to [CamdenPublicComments@covanta.com](mailto:CamdenPublicComments@covanta.com).
- Time may not be shared with or relinquished to others.
- Video screen sharing by commenters will not be permitted; only spoken and written comments will be allowed.
- If an individual provides inappropriate or threatening commentary, a warning will be issued. If the behavior continues, the commenter will be disconnected from the webinar.



# Agenda

- Purpose
- Covanta Camden Facility Performance
- Camden Green Initiative Project  
(<https://info.covanta.com/cgi>)
- Covanta Camden Community Outreach  
& Environmental Justice
- Q&A

# Purpose of AO-2021-25 Public Hearing

## AO 2021-25

On September 20, 2021, Commissioner LaTourette signed Administrative Order 2021-25 (AO 2021-25) outlining the NJDEP's expectations for applications expected to be subject to the Environmental Justice Act, N.J.S.A. 13:1D-157, *et seq.*, upon adoption of implementing regulations.

This public hearing is being held pursuant to AO 2021-25 to allow for constructive communication between the applicant, Covanta Camden, and the local Camden community.

# Purpose of AO-2021-25 Public Hearing

## Project

Covanta Camden is a permitted waste-to-energy facility which combusts municipal solid waste to produce renewable electricity. The following changes are proposed at the facility:

1. Upgrade its Air Quality Control (AQC) system, a \$60 million dollar investment, which includes:

- Installation of a state-of-the-art fabric filter baghouses
- Higher efficiency of acid gas removal with a dry recirculating ash system.
- Enhance existing Selective Non-Catalytic Reduction (SNCR) system for NOx control

2. Receive and process liquid wastes

# Purpose of AO-2021-25 Public Hearing

**Permit Modifications & Renewal:** The facility is seeking the following:

**1. Modify the Title V Operating Permit and the Solid Waste Operating Permit to include:**

- the Air Quality Control upgrades and
- the receipt and processing of liquid wastes.

Covanta Camden submitted its applications to New Jersey Department of Environmental Protection (NJDEP) for:

- Minor modification of Title V permit on July 8, 2022 and
- Significant modification of Solid Waste permit on October 10, 2022.

**2. Renew its five-year Title V Operating Permit.**

- Submitted renewal application to NJDEP on June 13, 2018.
- Determined by NJDEP to be administratively complete on June 21, 2018.

**Current Status:**

NJDEP is reviewing permit modification and renewal requests and is expected to render a decision after a technical review and receiving comments from the public.

# Permit Applications and Comments

- View permit modification and renewal applications and existing permits at [www.Covanta.com/camden](http://www.Covanta.com/camden)
- Comments are due by January 7, 2023
- Comments can be submitted:
  - via electronic mail to [CamdenPublicComments@covanta.com](mailto:CamdenPublicComments@covanta.com) or
  - via United States Postal Service to:

**Camden County Energy Recovery Associates, L.P.**

**600 Morgan Boulevard**

**Camden, NJ 08104**

**Attn: Griselle Rivera**

# Role of Waste-To-Energy in Sustainable Materials Management



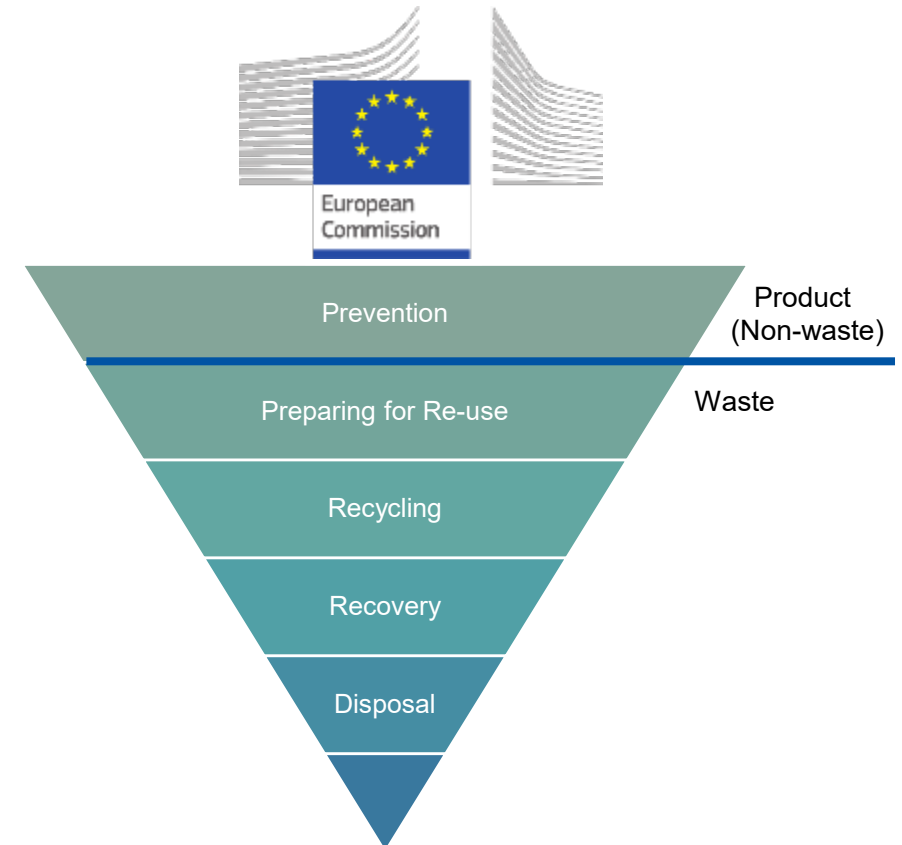
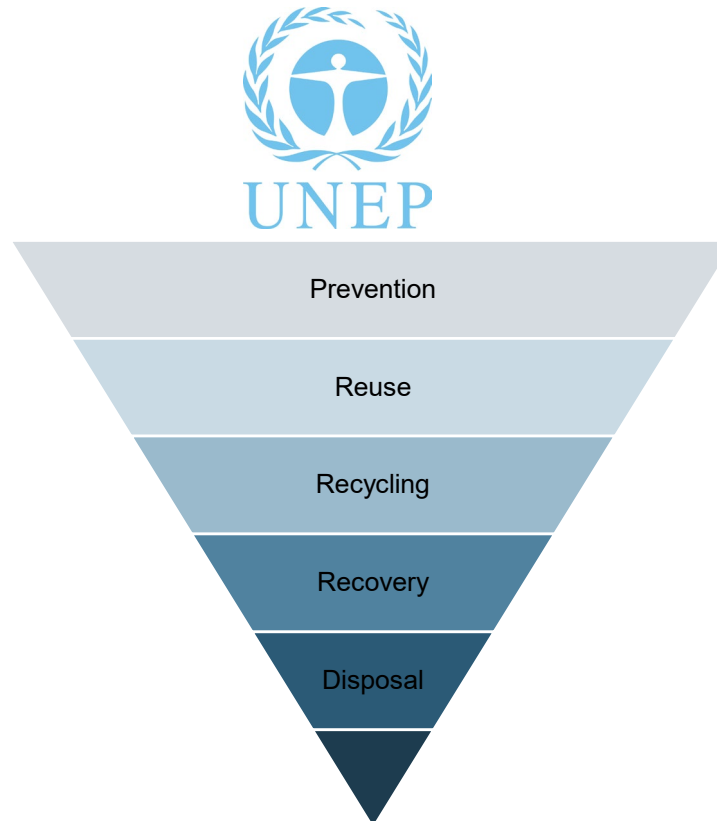
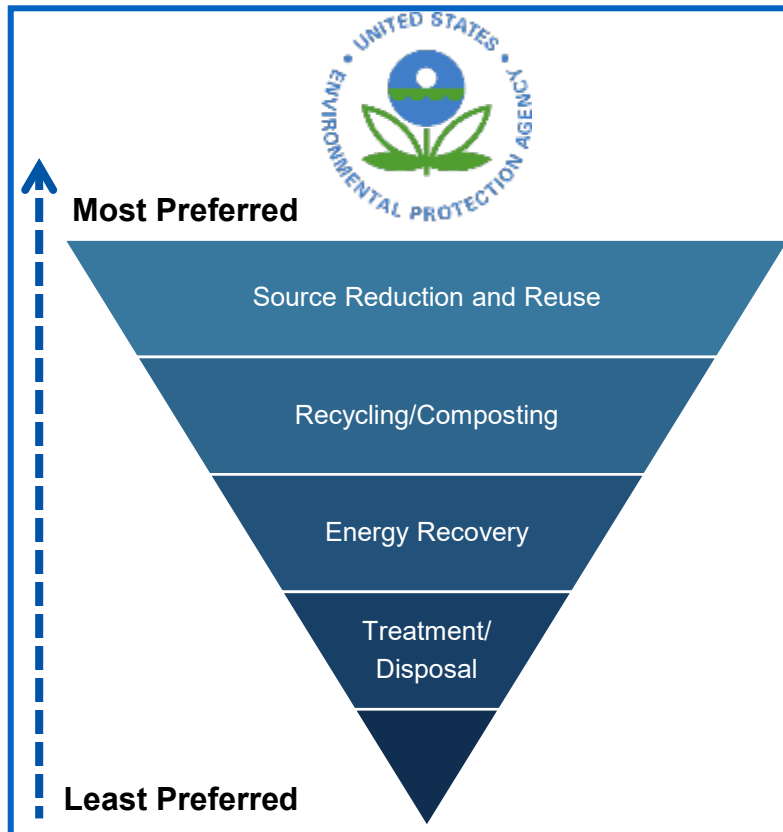


# Sustainable Materials Management

Waste Hierarchy: Rank strategies for municipal solid waste.

USEPA, the EU, and the United Nations rank the waste management strategies the same.

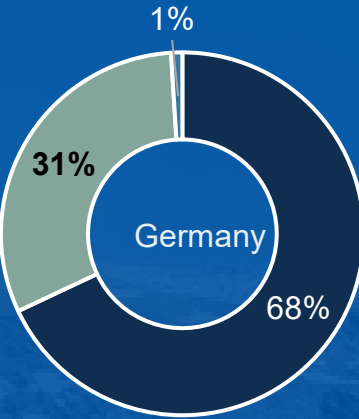
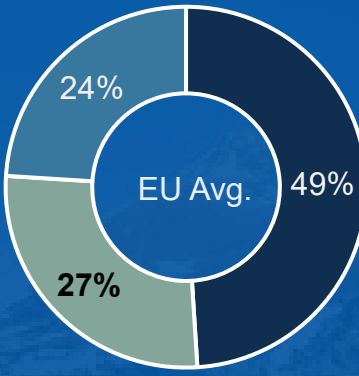
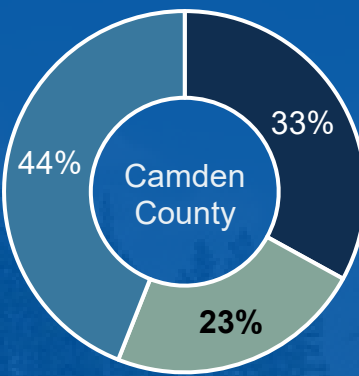
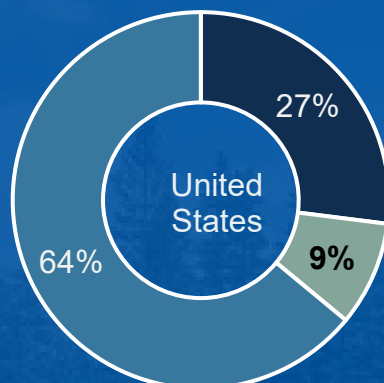
Source reduction (including reuse) is most preferred method, then recycling, energy recovery, and, lastly, treatment and disposal.





# How is waste managed around the world

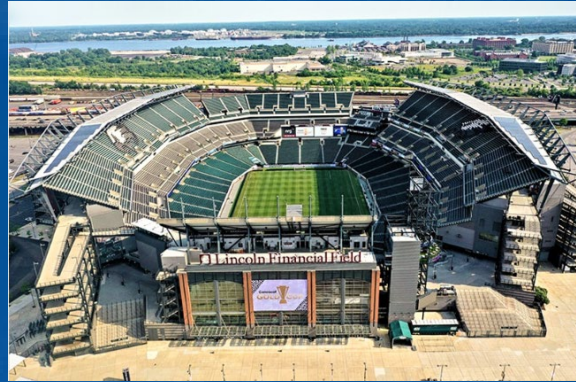
## The US has Room to Improve



- Recycling/Composting
- Waste-To-Energy
- Landfilling

*Data Sources:* Eurostat, Environmental Research & Education Foundation (EREF), Energy Recovery Council, NJDEP

United States disposes 250 million tons of trash to the landfill every year which is equivalent to filling 106 Lincoln Financial Field Stadiums



# In the US: Two Choices for Waste after Recycling



## Waste-to-Energy

- Engineered & controlled process that reduce impact from waste processing
- 90% reduction of waste in volume
- Metals are recovered for recycling
- Generates continuous renewable base load power
- Energy generation: **550 kWh per ton of waste** (enough to power 1 home for 1 month)
- Diverting 1 ton of waste from a landfill to a waste to energy facility, avoids 0.9\* ton of Carbon Dioxide equivalent (CO<sub>2</sub>e)
  - ~1 small car equivalent of trash can save 1 ton of CO<sub>2</sub>e from being emitted in the atmosphere



## Landfill

- Non-sustainable use of land
- Metals and other non-organic material do not decompose and can remain buried forever
- Organic waste slowly breaks down anaerobically (no oxygen present).
- Generates leachate (contaminated liquids from waste decomposition) - can lead to ground water contamination
- Major source of man-made methane gas. Methane is **84-86X more potent** than Carbon Dioxide over 20 years
- Energy generation: **65 kWh per ton of waste**

# Greenhouse Gas Benefits of WTE are Internationally Recognized



## U.S. EPA Obama Administration Clean Power Plan

**U.S. EPA Scientists:** “If the goal is greenhouse gas reduction, then WTE should be considered an option...”



**UNEP and Climate & Clean Air Coalition:** Waste-to-Energy is identified as one of the “targeted measures” to implement in order to reduce greenhouse gas emissions.



**IPCC:** WTE recognized as a “key GHG mitigation technology”



**Rio UN Conference:** “We therefore commit to further reduce, reuse and recycle waste (3Rs), and to increase energy recovery from waste”



**Davos World Economic Forum:** WTE included in the list of 10 low-carbon energy technologies



## Verified Carbon Standard & Clean Development Mechanism

Over 40 WTE projects registered under CDM with annual GHG reduction of 5 million metric tons of CO<sub>2</sub>e per year. 3 validated projects in the U.S.

# The Facility





## Covanta Camden Camden, NJ

The Covanta Camden Energy Recovery Center is an award-winning Waste-to-Energy Facility that serves the municipalities in Camden County and the surrounding region with reliable and sustainable waste management.



We ensure less waste goes to landfills which reduces greenhouse gas emissions by **345,000 tons** of CO<sub>2</sub>e -Enough to take 68,000 cars off the road for 1 year.



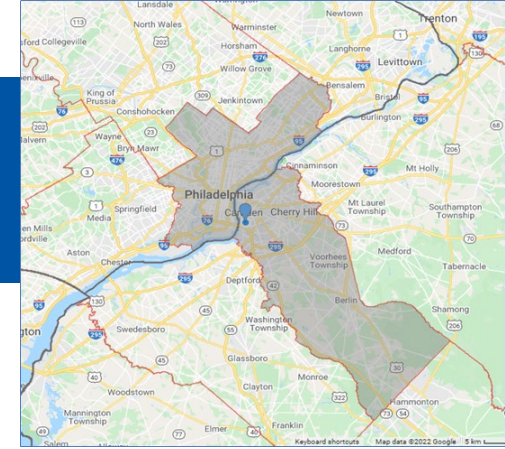
We manage waste from the Camden County to produce **21 megawatts** of electricity 24/7, powering **15,000 homes** in a year.



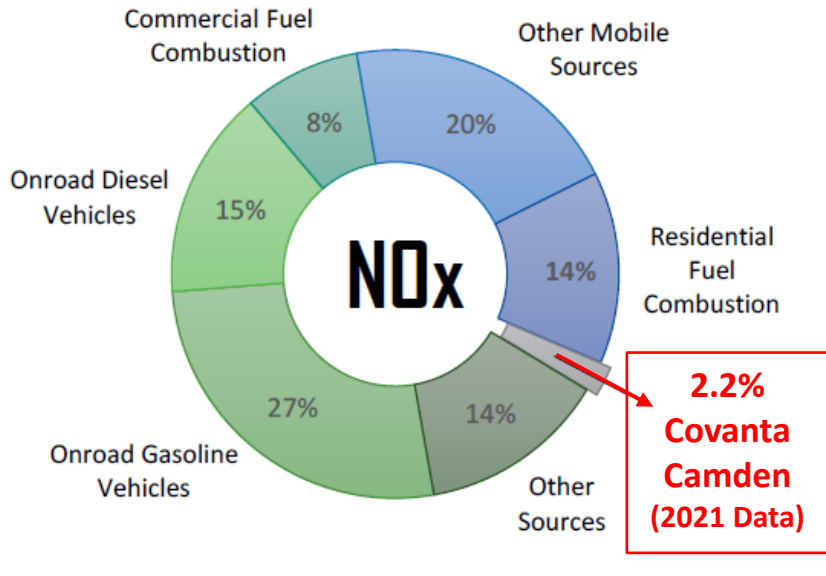
We recover **15,800 tons** of metal for recycling annually - enough to build **13,000 cars**.

# How Do Our Emissions Compare to Other Sources in the Air Shed?

Local air emissions\* in Camden County, NJ & local area (see map)

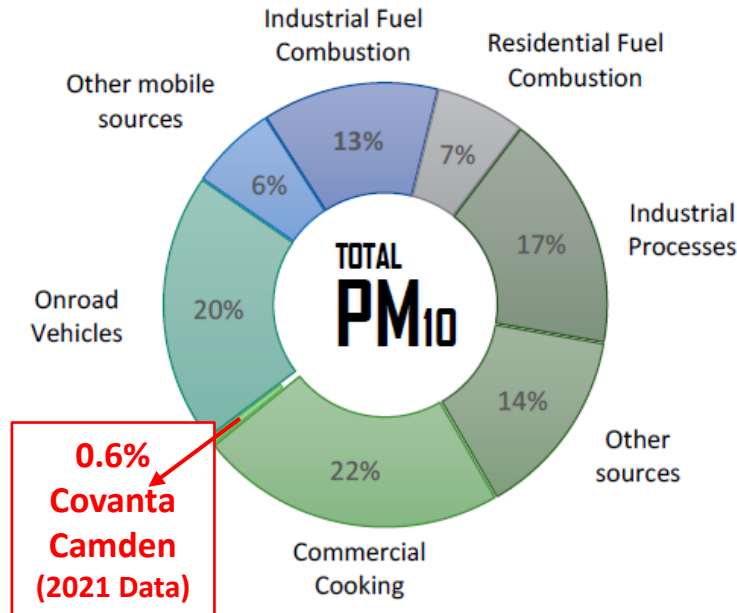


## Nitrogen Oxides



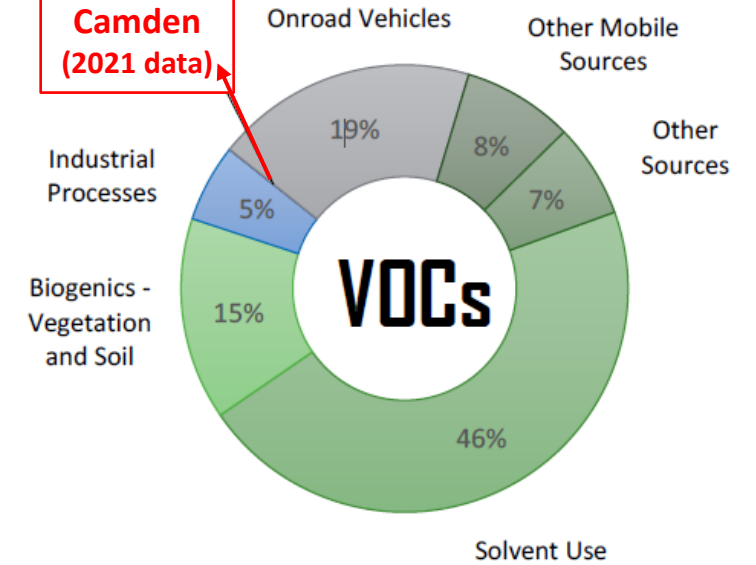
## Particulate Matter

(less than 10 microns)



Excluding Dust Sources, which make up 45% of the total inventory.

**0.01%  
Covanta  
Camden  
(2021 data)**



## Volatile Organic Compounds

\* Based on the 2017 US EPA National Emissions Inventory; the most recently released complete inventory. Where available, the facility's 2017 emissions were replaced with the reported 2021 emissions.

Continuous Emissions Monitoring (CEMS) Data for CVA Camden can be found at:  
<https://www.covanta.com/where-we-are/our-facilities/camden>

# Communication: Environmental Performance Transparency

In 2021, we started publishing our continuous emission monitoring performance on-line.

11/12/2022 

Reference Info		Carbon Monoxide (CO) Maximum 4Hr	Sulfur Dioxide (SO <sub>2</sub> ) Daily (24Hr) or Removal Efficiency		Nitrogen Oxides (NO <sub>x</sub> ) Daily (24Hr)	Opacity (stack) Maximum 6min
Permit Limit		100	29	>= 75%	150	10
Actual Data						
11/12/2022	Unit 1	18	10	89.8	136	1
11/12/2022	Unit 2	21	3	99.7	125	2
11/12/2022	Unit 3	22	11	81.5	126	4

All emission values reported in units consistent with the permit. CO, SO<sub>2</sub> and NO<sub>x</sub> reported as parts per million, dry gas basis at 7% O<sub>2</sub> (ppmdv7), Opacity as %, Removal Efficiency as %.

SO<sub>2</sub> compliance is based on concentration (ppm) or removal efficiency (% reduction between inlet and outlet emissions).

Link: <https://www.covanta.com/where-we-are/our-facilities/camden>



# The Project



A background image showing the Camden skyline with various skyscrapers and a large blue bridge in the foreground. The sky is overcast.

# CAMDEN

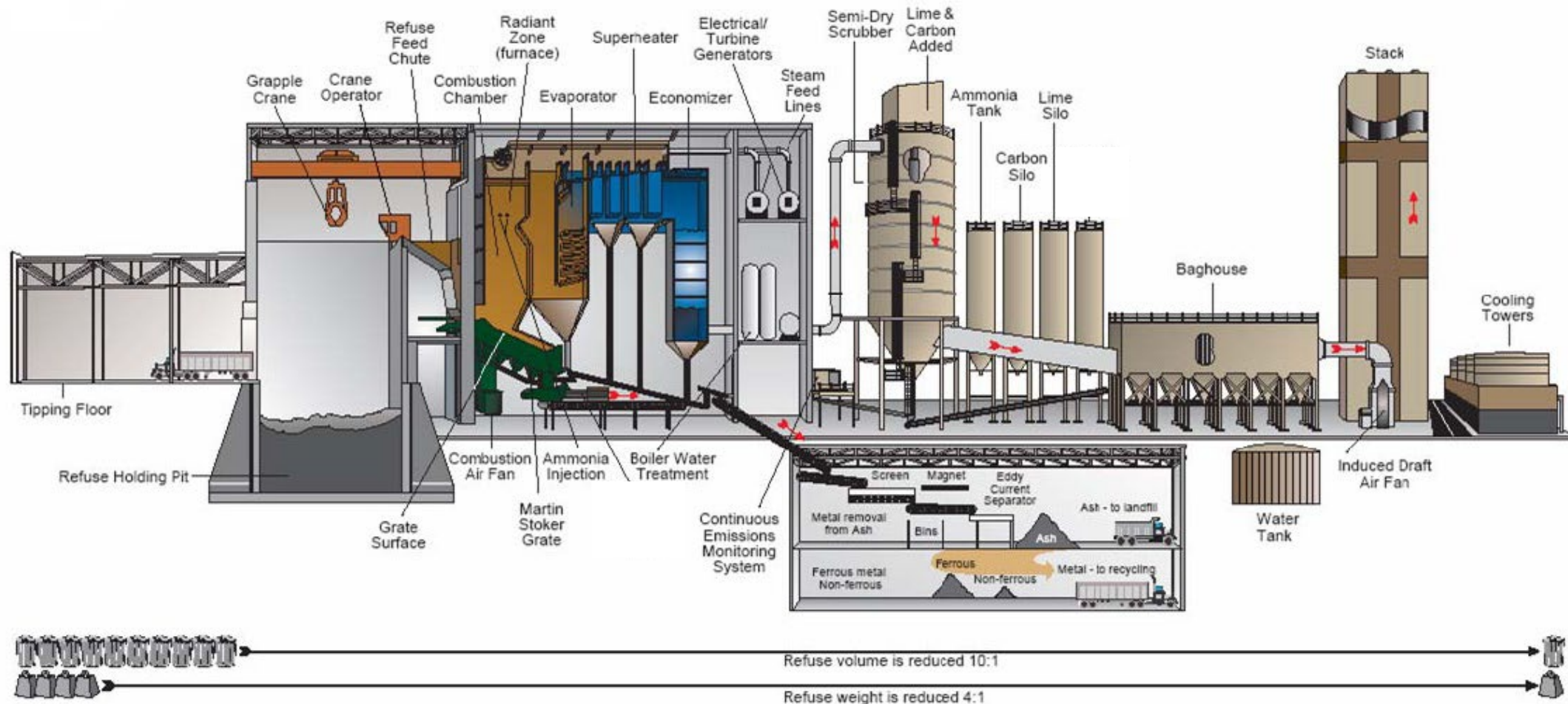
# GREEN *Initiative*

- Significant emission reductions
- Installation of a state-of-the-art fabric filter baghouses as part of a \$60 million dollar investment
- Installation of a recirculating ash system resulting in higher efficiency of acid gas removal
- Enhanced existing Selective Non-Catalytic Reduction (SNCR) system for Nitrogen Oxide (Nox) control
- Ability to receive and process liquid wastes
- Develop a Community Benefits Agreement (CBA) with the local community.

For more information visit <https://info.covanta.com/cgi>

**COVANTA**

# Typical Waste-to-Energy (WTE) Process

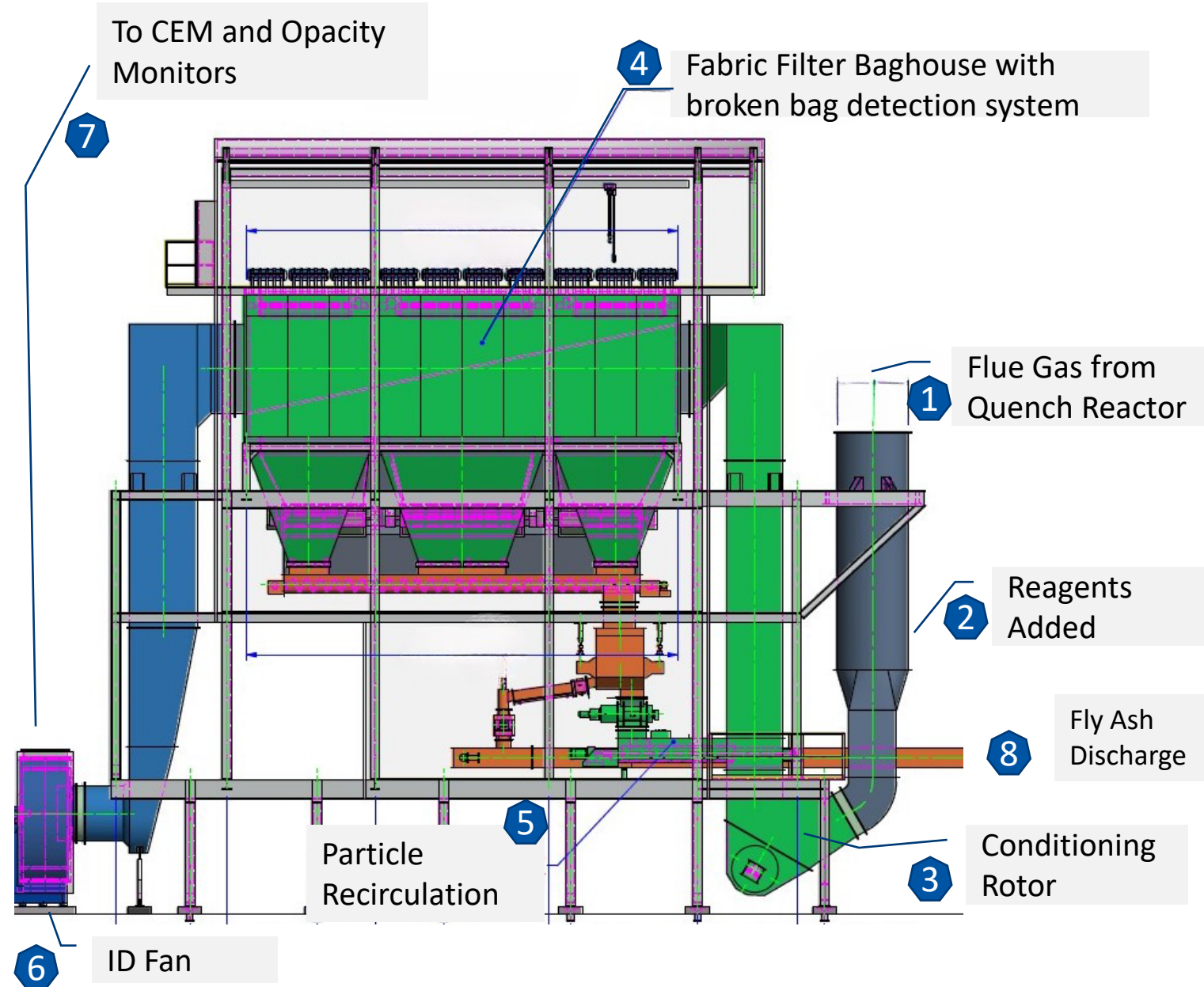


# Air Quality Control System

## System is a multi-stage process

- A. Dry Sorbent Injection (DSI) for dry hydrated lime and activated carbon.
- B. Conditioning rotor and fly-ash recirculation system.
- C. Flat bag fabric filter (baghouse) for separation of particulate.
- D. Opacity Monitors and Continuous Emission Monitoring (CEM) system

For more details on the baghouse, please go to <https://info.covanta.com/cgi>

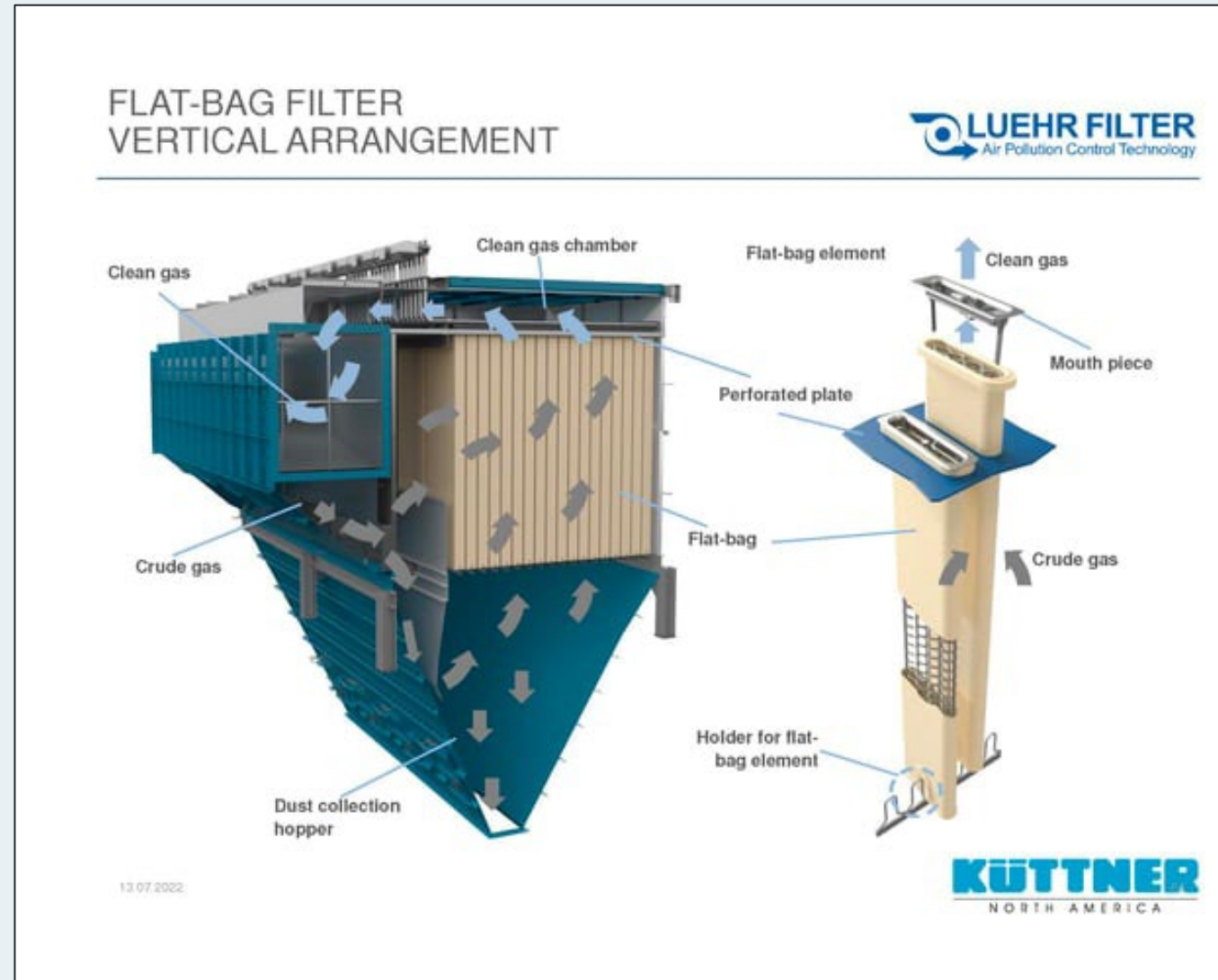


# What is a Baghouse?

- Removes particulate by a filter bag similar to a vacuum cleaner.
- Covanta will install one baghouse per boiler consisting of 600 10ft long bags.

## Advantages of Luehr Filter Design

- a) Advance filtration system
- b) Flat-bag element results in lower air to cloth ratio.
- c) Side inlet introduction of flue gas
- d) Dust (particulate) monitors for broken bag detection
- e) On-line cleaning of modules

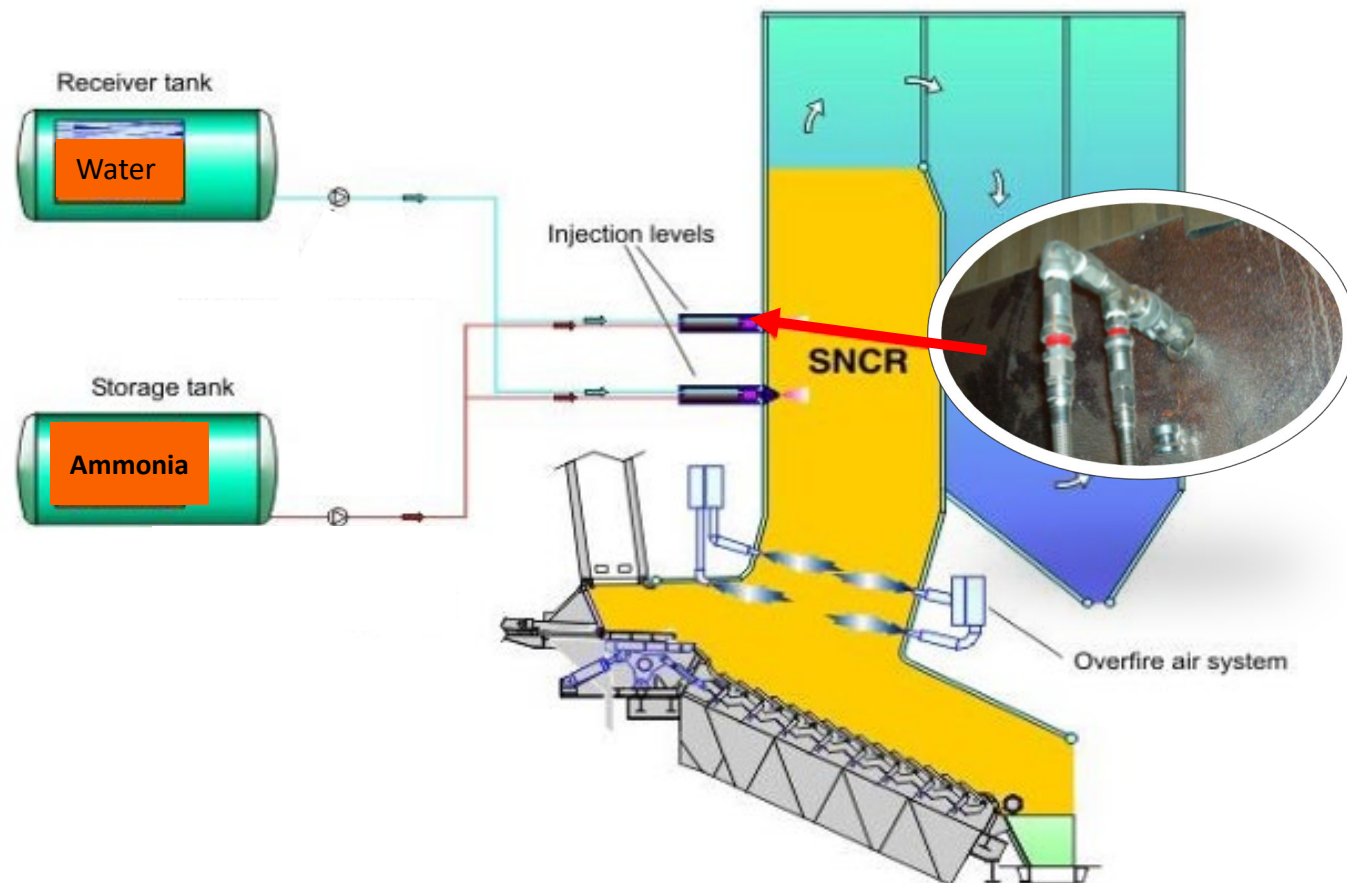


# Nitrogen Oxide (NO<sub>x</sub>) Control

Camden Facility is equipped with a Selective Non-Catalytic Reduction (SNCR) system installed in 2011.

Proposed upgrades to current system will include:

- Advanced controls including feedback from CEM and temperature monitors
- Use of liquid waste for carrier water will reduce usage of potable water in the SNCR system by over 50%.
- Proposed lower annual mass emission limit for NO<sub>x</sub>



Typical SNCR Process Flow Diagram

# Current Camden Facility Emissions

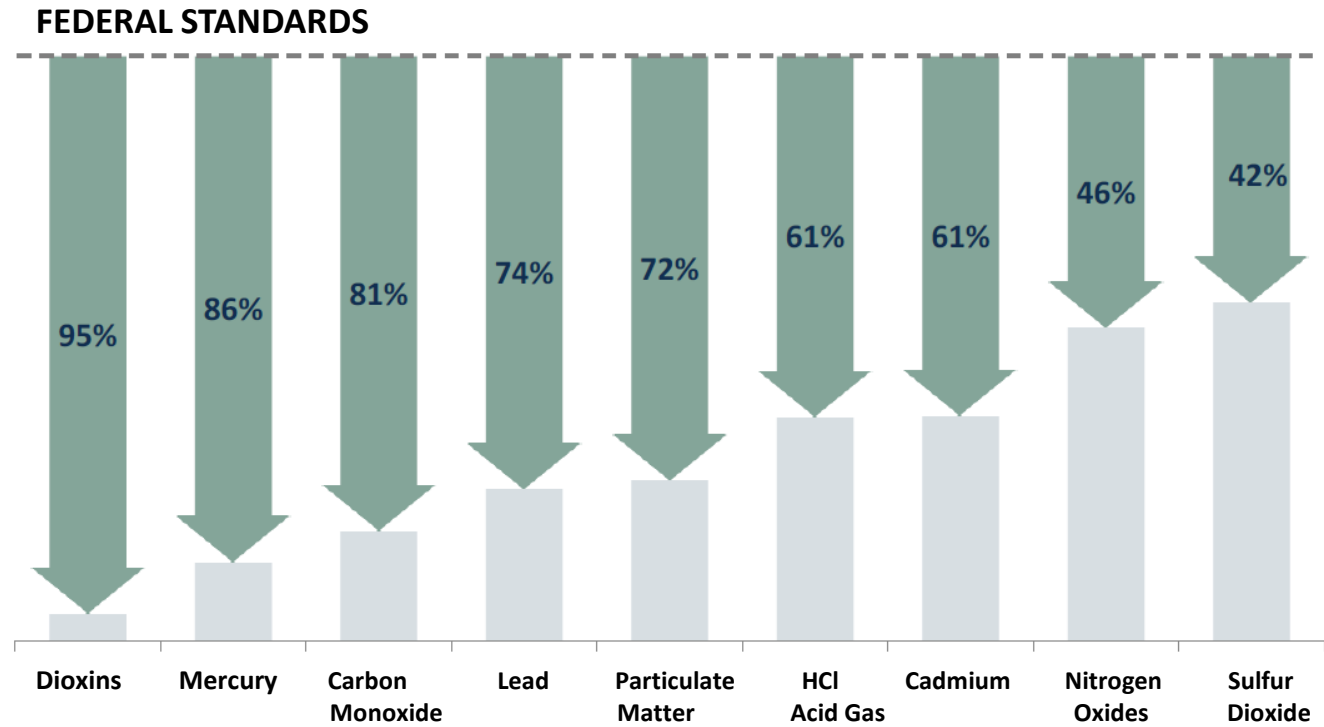
## Average Annual Facility Emissions

### 2019-2021 WTE Emissions Compared to Federal Standards

The facility operates up to **95% below** federal emissions standards

Emissions compared to federal guidelines for existing facilities (40 CFR 60 Subpart Cb).

Facility may be subject to more stringent requirements by permit or in accordance with other federal guidelines.



# Impact of Camden Green Initiative Project:

## Expected Emissions Reductions Upon Project Completion

Parameter	Expected Mass Emissions Reduction, %
Lead	95 %
Cadmium	90 %
Mercury	80 %
Dioxins	70 %
SO <sub>2</sub> (acid gas)	60 %
Particulate	55 %
HCl (acid gas)	50 %
PM <sub>10</sub>	45 %
H <sub>2</sub> SO <sub>4</sub> (acid gas)	45 %
NOx	5 %



# Liquids Materials Management

## 1. How does Covanta handle liquids?

Non-hazardous liquids are handled in an environmentally sound manner by directly spraying the liquid into the combustion zone of the boiler.

## 2. How will Covanta store the liquids?

The liquids will be stored in two (2) storage tanks located inside the tipping floor building.

## 3. What experience does Covanta have at handling liquids?

Covanta regularly processes liquids at our Niagara, NY Indianapolis, and our former Warren County, NJ locations for a combined 34 years.

## 4. What kinds of liquids are processed?

Non-hazardous liquids are typically at least 95% water and used as process wash waters in the pharmaceutical, food, or other industrial or manufacturing operations.

# Examples of Liquids to be Processed at Covanta

Typical liquids are from **tank rinses and line flushes** from various manufacturing and industrial applications such as:



Food and Beverage



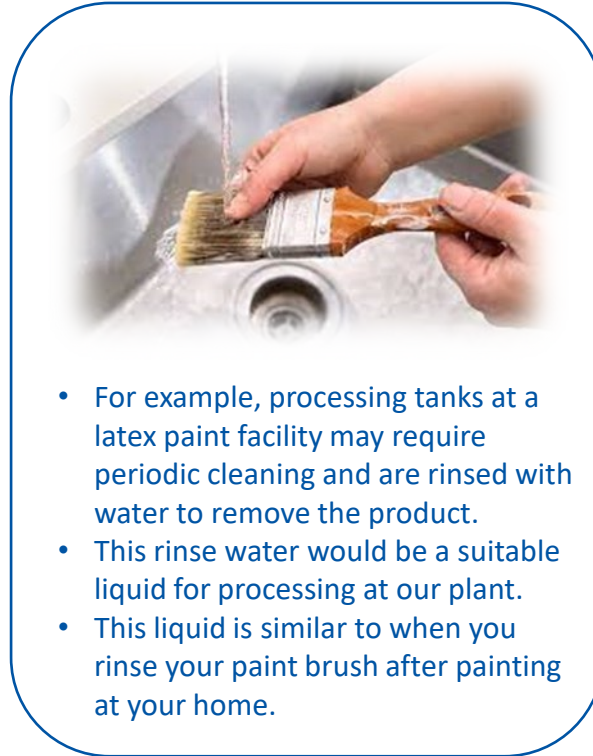
Adhesives, Coatings & Latex Paint



Nutrition, Fibers, Vitamins & Minerals



Pharmaceutical & Biotechnology



## Liquids that will NOT be accepted:

- Landfill leachate
- Grease trap cleanout
- Used oil
- Pesticides / Fungicides / Insecticides
- Septic tank cleanouts
- Sewage sludges
- Liquids containing PFAS

# Liquids Approval & Handling

## Liquids Approval

Liquids follow a rigorous two (2) step approval process.

1. Covanta reviews data and/or laboratory analysis submitted by the generator on the liquid waste stream.
2. If the liquids meet all required specifications, final approval lies with the Camden facility.

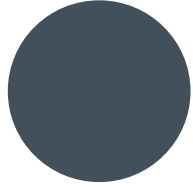
## Re-Certification

On an annual basis, the generator will certify with Covanta the liquids generation process and waste stream with additional data and/or laboratory analysis.

## At the plant

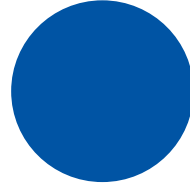
- Liquids are sampled upon arrival prior to acceptance.
- The unloading area is indoors and is surrounded by a concrete berm.
- Liquid unloaded into storage tanks fitted with carbon filters and high-level monitoring.
- Odors will be minimized due to the negative pressure design of the tipping floor building.
- Noise will be minimized due to the unloading area being indoors.

# Frequently Asked Questions (FAQs)



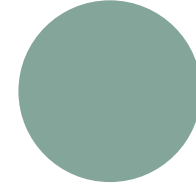
## **Will processing liquids increase truck traffic?**

Truck traffic will not increase due to liquids however, the project will increase facility efficiency which may result in an increase of 1 truck per hour over current levels.



## **Will emissions increase with this project?**

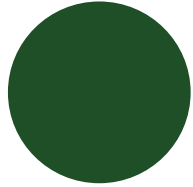
No. The CGI project will reduce emissions by up to 95%.



## **Will you process liquids without a baghouse?**

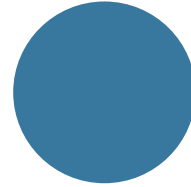
No. We will start processing liquids only when a baghouse has been installed on the boiler.

# Frequently Asked Questions (FAQs)



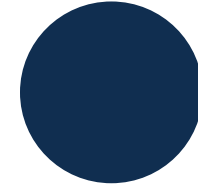
## **Is this project harmful to my health?**

No, our recent health risk assessment shows health impacts well below levels set by US EPA and NJDEP.



## **Will you be accepting landfill leachate to process?**

No, Covanta Camden will not accept landfill leachate for processing.



## **Will you process liquids containing PFAS?**

No, Covanta does not accept liquids containing PFAS.

# Camden Green Initiative (CGI) Project Timeline

Date	Event
July 2022	<ul style="list-style-type: none"> <li>Community Benefit Agreement (CBA) Signed</li> <li>Air Permit Application submitted to NJDEP</li> </ul>
October 2022	<ul style="list-style-type: none"> <li>Solid Waste Permit Modification submitted to NJDEP</li> <li>EJ Public Hearing 60 Day Notice posted</li> </ul>
December 2022	<ul style="list-style-type: none"> <li>12/8/22 Covanta Environmental Justice Public Hearing</li> </ul>
January 2023	<ul style="list-style-type: none"> <li>1/7/23 Comment period for Covanta EJ Public Hearing closes</li> </ul>
Q1 2023	<ul style="list-style-type: none"> <li>Air Permit Technically Complete – Draft permit issued</li> </ul>
Q2/Q3 2023	<ul style="list-style-type: none"> <li>Solid Waste Permit technically complete – Draft permit issued</li> <li>NJDEP Public Hearings for Air Permit and Solid Waste Permit</li> </ul>
Q3/Q4 2023	<ul style="list-style-type: none"> <li>Final permits received</li> </ul>
Q4 2023	<ul style="list-style-type: none"> <li>Place equipment orders and site preparation begins</li> </ul>
Q3 2024	<ul style="list-style-type: none"> <li>Baghouse 3 delivered. Installation begins.</li> </ul>
Q1 2025	<ul style="list-style-type: none"> <li><b>Unit 3 startup</b> / Liquids processing</li> </ul>
Q3 2025	<ul style="list-style-type: none"> <li>Baghouse 2 delivered. Installation begins.</li> </ul>
Q1 2026	<ul style="list-style-type: none"> <li><b>Unit 2 startup</b> / Liquids processing</li> </ul>
Q2 2026	<ul style="list-style-type: none"> <li>Baghouse 1 delivered. Installation begins.</li> </ul>
Q3 2026	<ul style="list-style-type: none"> <li><b>Unit 1 startup</b> / Liquids processing</li> </ul>

Notes: The above schedule are estimates and are impacted by community input and NJDEP review/approval

# Community Outreach & Environmental Justice Policy

Since 2011, Covanta has and continues to be committed to measurable action to protect the communities we serve and operate in.

In 2011, Industry-first **Environmental Justice Policy**

- Serves as a national model
- Today, over a decade later, this policy continues to evolve to guide our community engagement

## We are committed to...

Have open, two-way communication with communities on issues which may be of interest or concern to them...

Having an enhanced public participation strategy with communities on major facility permit actions and engage in substantive conversations with community members during the early stages of the permitting process.

**COVANTA**

Powering Today. Protecting Tomorrow.

## Community Outreach & Environmental Justice Policy

Covanta is committed to engage with and support the communities in which we have or will have facilities. Covanta believes in the meaningful opportunity for all people, regardless of race, ethnicity, color, income, national origin or education level to be knowledgeable and have the right to participate in public decisions and actions which have an impact on their environment and neighborhoods.

To implement this policy consistent with our sustainability objectives, we commit to:

- Reduce discharges and minimize emissions from our facilities and to reduce other potential impacts of our operations, taking into account cumulative impacts
- Identify and engage with individuals and organizations in the communities in which we operate, or in which we may operate, that are interested in our operations
- Have open, two-way communication with communities on issues which may be of interest or concern to them, including environmental and quality of life issues in the community. Such communication shall include participation in meetings with community members or affected groups
- Have an enhanced public participation strategy with communities on major facility permit actions and engage in substantive conversations with community members during the early stages of the permitting process
- Work diligently to respond to issues identified by communities in which we operate
- Promptly and effectively notify the community in the event of situations that may adversely impact the environment or their health

covanta.com

# Environmental Justice for Covanta – not just words BUT ACTION!

## New Baghouses

- Newark, NJ
- Huntsville, AL
- Hillsborough, FL
- SEMASS, MA

## New NOx Controls/Reductions

- Camden, NJ ← 2011
- Newark, NJ
- Fairfax, VA
- Huntsville, AL
- Alexandria, VA
- SEMASS, MA
- Haverhill, MA
- Stanislaus, CA (in process)

## In Planning/Permitting

- Camden, NJ - Install Baghouse  
Upgrade Scrubber & SNCR ←
- Chester, PA - NOx Reduction
- Lancaster, PA – NOx Reduction



Covanta is the only company that openly supported the **NJ Environmental Justice Law passed in 2020**, which aims to address the cumulative environmental impacts in overburdened communities.

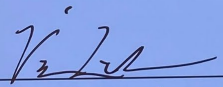




# COVANTA

## Community Benefit Agreement

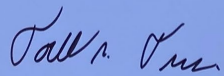
**Covanta Camden and the City of Camden enter into this Covanta Camden Community Benefits Agreement (CCCBA) as a commitment to ensure safe operations and environmental protection, and to the continued engagement and partnership with the communities of Morgan Village and Waterfront South.**

  
City of Camden  
Mayor Vic Carstarphen

*Shaneka Boucher*  
City of Camden  
Councilwoman Shaneka Boucher

  
Morgan Village  
Esther Gross

*Portia Simmons*  
Waterfront South  
Portia Simmons

  
Covanta Camden  
Todd Frace

## Covanta Camden Community Benefits Agreement (CCCBA)

- Long-term commitment with residents in our neighborhoods of Waterfront South and Morgan Village.
- Initial funding of \$50k with additional revenues from project milestones and liquids revenue share.
- A committee of Waterfront South and Morgan Village representatives will decide what local projects receive funds.
- Fund to be administered by Community Foundation of South Jersey (CFSJ).
- CCCBA is in addition to our normal outreach activities for the entire City of Camden.



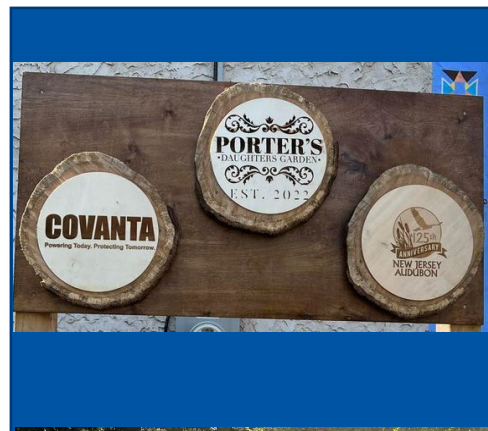


Over  
500  
Distributed Envelopes  
to Take Back  
Prescription Drugs



40  
Events attended or  
sponsored by  
Covanta Employees

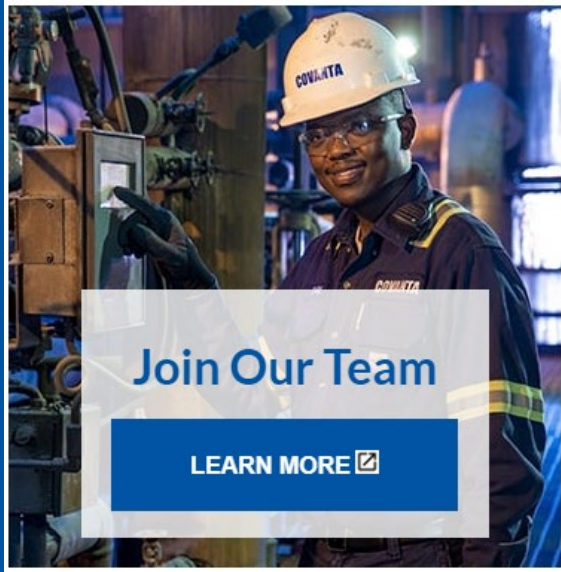
3  
Local Job Fairs



37 Employees  
Volunteered  
an average of  
14 Hours



# Hire Local!



The screenshot shows the top navigation bar of the Covanta website. It includes the Camden Community Partnership logo on the left, a newsletter sign-up button, and social media icons for Facebook, Instagram, Twitter, and LinkedIn. The main navigation menu contains links for 'About Us', 'Our Work', 'The Camden Story', 'Get Involved', and 'Job Opportunities'. The main content area features the large 'COVANTA' logo, a brief description of the company as a world leader in sustainable waste and energy solutions, and a prominent 'FIND JOBS' button.



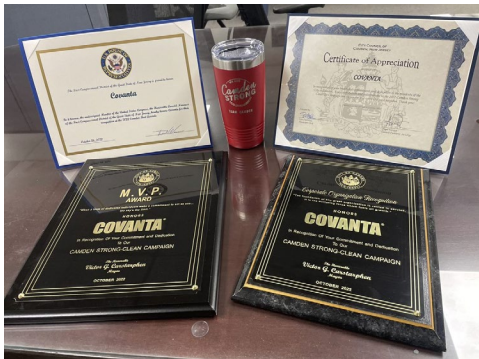
The screenshot shows a LinkedIn job posting for Covanta. The job title is 'Covanta - 15th Annual HBCU Marketplace'. The location is 'Covanta · Camden, NJ (On-site)' and it was posted '6 days ago'. The job is listed as 'Full-time' and is in the 'Environmental Services' industry. It has '1,001-5,000 employees' and '95 connections · 4 school alumni'. There is a link to 'See recent hiring trends for Covanta Energy. Try Premium for free'. At the bottom, there are 'Apply' and 'Save' buttons.

# Community Outreach



SOUTH JERSEY  
**Biz**

## 2022 Community Impact Award Winner



## NJBIA/NJBM 2022 Awards for Excellence



**COVANTA STRIVES TO MAKE A** positive impact wherever it can. Through its community-based programs, the Morristown-based waste management company works with a variety of organizations on the environmental and social issues that are top of mind for its neighbors and facilities.

Although the company's Camden location makes up only a fraction of Covanta's employee and resource base, workers there have dedicated an incredible amount of time and effort to supporting their neighbors and the places they call home.

Throughout 2022, Covanta's Camden facility has: worked with the Audubon Society to convert an empty lot into a pollinator garden; teamed up with Wholesome Riches & the South Jersey Food Bank to help distribute food at the H.B. Wilson Family School; participated in "Camden Strong" clean-up events; helped sponsor the city's Juneteenth event, and participated in the Camden County Police Department Pride Parade; participated in three Camden County Police Department community clean up events; and much more.

**COVANTA**



# Thank You

- View permit renewal applications and existing permits at [www.Covanta.com/camden](http://www.Covanta.com/camden)
- View more information on the Camden Green Initiative at <https://info.covanta.com/cgi>
- Comments are due by January 7, 2023
- Comments can be submitted:
  - via electronic mail to [CamdenPublicComments@covanta.com](mailto:CamdenPublicComments@covanta.com) or
  - via United States Postal Service to:

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