COVANTA
Powering Today. Protecting Tomorrow.

Covanta Camden and the Camden Microgrid Project

Frequently Asked Questions (FAQs)

Microgrid Project Questions

1) Who will own the microgrid? Who would operate it?

Camden County plans to procure ownership and operation of the microgrid through a public-private partnership. Covanta will not be the owner of the microgrid.

2) At what cost of electricity (c/kwh) would Covanta be selling electricity to the microgrid? At what cost would the microgrid owner be selling electricity to customers?

The project is still in the feasibility stage and financial details have not yet been determined. However, it has to be cost competitive with the existing electricity market.

3) Why is the wastewater pipeline part of the microgrid project? Can it be done independently, or is there some financial reason it needs to be tied together?

For this project, it makes sense to join both wastewater and power in the same project since the trench for the wastewater effluent can also house the wire for the power, thus saving construction and capital costs. The purpose of supplying power from the Camden facility is to increase the reliability of the power supply to the wastewater treatment facility to minimize disruptions to its operation that could result in wastewater releases.

As an added benefit, the wastewater connection will improve the sustainability of the waste-to-energy facility by enabling wastewater from the CCMUA to be reused. This will result in a significant reduction in drinking water usage and will lessen the stress on the local groundwater aquifer.

4) What is the process for the microgrid approval from the state?

The New Jersey Board of Public Utilities (NJ BPU) sponsored the initial rounds of Microgrid feasibility studies post of Hurricane Sandy. The NJ BPU must approve any final decisions related to the interconnection of the project.

5) What is the timeline for starting and completing the microgrid project?

The initial feasibility study was completed in 2019. The design study is expected to begin in late July and to last for approximately six (6) to nine (9) months.

6) What other business entities would be connected to the microgrid? Holtec? Others?

Covanta is not involved in this part of the project.

7) Is the microgrid necessary for Covanta Camden to stay open? How likely is it that the plant would close if the microgrid is not developed?

The microgrid project is not necessary for Covanta Camden to continue operations.

Emissions Control Questions

8) Please tell us what emissions controls Covanta is proposing.

Covanta is planning to replace our Electrostatic Precipitators (ESP) with baghouse technology. Operating like a very efficient vacuum cleaner, a baghouse removes 99.5 percent of the particulate matter from combustion gases.

9) Part of the microgrid proposal is centered on the idea that a baghouse would be installed at Covanta Camden to improve emissions. Will a baghouse be installed only if the microgrid proposal is approved?

Installation of the baghouse is not contingent upon the microgrid project moving forward. Covanta is committed to installing the baghouse at our Camden facility. In our recent sustainability report, we committed to the implementation of five (5) projects by 2023 to further reduce emissions in Environmental Justice communities. The Camden baghouse project is one of those five projects.

10) What would a new baghouse system cost?

Initial estimates on the baghouse range between $40m and $50m.

11) Is the new baghouse required by NJ DEP or EPA in any way? If so, in what permit or regulation, and by when?

No, Covanta is voluntarily installing the baghouse.

The baghouse is not required by the NJDEP or USEPA nor have the agencies proposed lower emissions limits or other requirements that would necessitate the installation of the baghouse. Emissions from the current electrostatic precipitator are well below permit requirements and federal guidelines. Installing a baghouse is part of our commitment to continuous improvement and reducing emissions in Environmental Justice communities. For more information on the facility's environmental performance see the attached information sheet or click here.

12) What other Covanta incinerators were built without a baghouse and have since installed one?

Several of the waste-to-energy (WTE) facilities that we currently operate in the United States were initially built with electrostatic precipitators (ESPs). Some regulators and local governments originally wanted ESPs installed because they viewed ESPs as the better technology. Baghouses were a newer technology, and some had concerns that the baghouses were not well suited to the WTE process.

Over time, Covanta has been replacing both baghouses and ESPs at its facilities, prioritizing replacements based on their performance. The Camden facility, which Covanta acquired seven years ago, was built with one of the most advanced ESP systems available at the time and has had stronger environmental performance than the other ESPs in our fleet of facilities.

13) Can you provide emissions data on before/after baghouse installation at other Covanta facilities?

Yes, please see attached data for pre and post baghouse data at the Covanta Essex facility located in Newark, NJ. Emissions were reduced by as much as 90% with the installation of the baghouse.

14) How many baghouses will you be installing?

We will be installing three (3) baghouses, one for each boiler.

15) When you are installing baghouses, will the emissions increase?

No, emissions will not increase during installation of the baghouse. Each baghouse will be installed one at a time and the unit will be shut down during the installation process.

16) We are concerned that once the microgrid is installed that Covanta will not install the baghouse.

Covanta is committed to installing the baghouse at our Camden facility. Engineering efforts have already been started for the design and permitting of the baghouse.

17) Can you tell us what the emissions improvements from the baghouse will look like?

Please see the attached information sheet estimating the improvements at our Camden facility based on the efficiencies experienced at other Covanta plants with the installation of a baghouse.

18) How fast can the baghouse be installed? Can the baghouse be installed in one year?

There will be three separate baghouses installed, one for each boiler. Prior experience shows that it can take up to one (1) year for each baghouse to be installed. Factors include permitting, equipment availability, contractor availability and weather.

19) Why did it take so long to install a baghouse at Camden?

Covanta acquired the Covanta Camden facility in 2013. Since this time, Covanta has been operating and evaluating the facility while developing a schedule for projected upgrades based on its performance. Though Covanta plans to install baghouse technology, the current Electrostatic Precipitators utilized at Covanta Camden are highly effective and are up to 96% below emissions guidelines. Since acquiring this

facility in 2013, Covanta has spent over $55m in maintenance and capital expenditures to improve operations and the environmental performance.

20) The Covanta Sustainability Report mentions the implementation of five (5) projects by 2023 to further reduce emissions in Environmental Justice communities. Is the Camden baghouse project one of them?

Yes, installation of the baghouse at Covanta Camden is one of the projects mentioned.

21) Does the Covanta Camden facility have a selective non-catalytic reduction (SNCR) system installed for NOx? When was this installed?

Yes, an SNCR systems was installed in 2011.

22) What would it cost to upgrade to selective catalytic reduction (SCR)?

We have not pursued estimates to install SCR at the Camden facility. SCR is still a very new technology option for WTE facilities which has only been installed at a few brand-new facilities.

23) Does the Camden facility use Covanta's proprietary "Low-NOx" system to reduce NOx emissions to around 90-110 ppm? If not, why not?

The Camden facility's NOx emissions are already in the range achievable by our Low NOx system. In 2019, our annual average NOx emissions were 103.8 ppm which is 31% below our permit limit. In addition, our Low NOx technology was developed specifically for use with a different combustion technology than the one in place at Camden.

General Facility Operations and other Community Questions

24) How many people work at the facility? How many of them live in the City of Camden? How many in Camden County, outside of Camden City?

Covanta Camden employs 47 people. Eleven (11) employees live in Camden County and four (4) live in the City of Camden.

25) Where does the waste come from? Any from outside of Camden County? If so, where?

Waste is predominantly from Camden County, but waste is also received from Pennsylvania and other parts of New Jersey.

26) How many megawatt hours does Covanta produce?

The Camden facility typically produces approximately 180,000 Megawatt hours per year. This is enough electricity to power approximately 14,000 homes.

27) What happens to the ash generated at the Covanta Camden facility?

The non-hazardous ash is taken to two (2) locations for disposition: 1) Gloucester County Improvement Authority Landfill in Swedesboro, NJ. 2) Covanta Metals Management facility in Fairless, PA. Once our Fairless, PA facility is fully operational, ash will be processed for recovery of additional metal for recycling and aggregates, further reducing the amount landfilled by approximately 60%.

28) What is the average lifespan of a waste-to-energy facility?

Waste to Energy facilities were built with lifespans of 50-60 years in mind. With regular maintenance and investment, these facilities run as well – if not better – than when they were first built.

29) What is the host fee that Covanta pays to Camden? (and is it to the city or the county?)

Covanta Camden pays approximately $1.9m annually to the City of Camden. Annual lease payments of $500k are also made to Camden County.

30) How long is your lease with Camden County?

Our lease with Camden County is until June 30, 2031 with two (2) tenant options until June 30, 2041.

31) What community projects and partnerships does Covanta have in NJ?

Covanta Camden has worked with the following local organizations. Please see the attached Camden Community Events Summary for further details.

- Camden City School District
- Camden Sophisticated Sisters
- Cathedral Kitchen
- Center for Aquatic Sciences at Adventure Aquarium
  - Community and Urban Science Enrichment (CAUSE) Program
- Center for Environmental Transformation
- Cooper's Ferry Partnership
  - Camden Collaborative Initiative
  - Camden Jam, Connect the Lots, Let's Move, Camden Night Gardens
- Heart of Camden
- Morgan Village Circle Community Development Corporation

In addition to local organizations around the state of New Jersey, Covanta also works with:

- Boys and Girls Club of Union County
- Girls and Boys Club of Newark
- New Jersey Audubon Society
- Salvation Army
- Newark Public Schools
- United Way of Greater Newark, Inc.

32) Has Covanta Camden had any fires in the last decade that required an off-site emergency response?

We are not aware of any fires that required off-site emergency response at Camden.

33) Has Covanta installed new fire detection and suppression systems at the Camden facility? It not, why, and when will it be improved?

The current fire suppression system meets all local requirements, however, capital upgrades to the system are scheduled with the incorporation of the baghouse project.

34) Does Covanta plan to put its emissions data online real-time, as they already do at some other facilities??

Yes, we are currently in the process of adding this capability for all our locations. The data for the Camden facility will be posted and available at Covanta.com/Camden in the coming months. We will also post our annual stack test data as well.

35) What emissions does Covanta continuously monitor?

We continuously monitor for nitrogen oxides (NOx), sulfur oxides (SOx), carbon monoxide (CO) and Opacity (a measure of smoke or dust).

36) What emissions are monitored on a periodic basis, such as annual stack tests?

Annual stack tests measure heavy metals, acid gases, particulate matter, and organics like dioxins and furans.

37) Is Covanta willing to install continuous emissions monitors for any additional emissions?

We are aware of a variety of different continuous emission monitors in various stages of development, many of which we have helped to develop, research and pilot at our facilities. Unfortunately, the vast majority have not been deemed accurate enough to serve as regulatory devices or accurately and consistently measure contaminants when compared to a regulatory reference measure.

Importantly, the stack test results are designed to measure the performance of the combustion process and air pollution control equipment working together as a system and set operation parameters that ensure consistent environmental performance throughout the year. Key operating parameters (e.g. reagent injection rates, baghouse inlet temperature) in place during the stack test become our operating requirement for the rest of the year. Our facility operations staff works 24/7 to continuous monitor and operate the facility in line with these parameters to ensure that the emissions measurements taken during the stack testing program are representative of the full year.

38) On your website, there is reference to a Mercury Bounty Program. Has this program been run in Camden?

This program has been conducted at other Covanta facilities but has not been implemented in Camden. Discussions have been started to coordinate this program with Camden County.

39) What are the differences between emissions limits for new facilities, existing facilities and outside the United States?

Please see the attached information sheet comparing Covanta Camden's results with new facility, existing facility, European Union, and Canadian emission limits.

40) Can you describe the stack test process? Who evaluates the stack test information?

An independent third-party stack test company is contracted by Covanta to perform the stack testing in accordance with specific procedures that are outlined in our permit and regulatory requirements. NJDEP has full authority to monitor and directly observe stack testing. Samples are sent to an independent certified laboratory. Results and the stack test report are submitted to the NJDEP for their review and comment. Key operating parameters (e.g. carbon addition rate, lime addition rate, production rate) become operating limits that we are required to maintain the remainder of the year.

41) Has there been any air modeling done since the initial permitting of the plant?

Revised air modeling has not been required since the initial permitting of the plant. However, we expect that updated air modeling will be required as part of the baghouse permit application.

42) Can I share your environmental justice policy on your website?

Yes, attached is a copy for easy reference. Also, the link to the Covanta Environmental Justice policy can be found at:

https://www.covanta.com/In-Your-Community/Community-Outreach-Environmental-Justice