



**REQUEST FOR INFORMATION
for the
Acceptance of Pre-Processed Food Waste
for The City of Philadelphia**

Issued by:
THE CITY OF PHILADELPHIA (“City”)
Philadelphia Water Department

**Responses must be received no later than 5:00 p.m. Philadelphia, PA, local time,
on August 4, 2017.**

James Kenney, Mayor
Debra A. McCarty, Commissioner, Philadelphia Water Department

Table of Contents

I.	RESPONSE CALENDAR.....	1
II.	RFI CONTACT INFORMATION FOR QUESTIONS	1
III.	BACKGROUND	2
IV.	PURPOSE OF REQUEST FOR INFORMATION	3
V.	INFORMATION REQUESTED	3
VI.	SUBMISSION REQUIREMENTS	6
VII.	USE OF RESPONSES.....	7
VIII.	HOW TO SUBMIT.....	7
IX.	CONFIDENTIALITY AND PUBLIC DISCLOSURE	8
X.	RIGHTS AND OPTIONS RESERVED.....	8

**FOOD WASTE CO-DIGESTION
REQUEST FOR INFORMATION (RFI)**

I. RESPONSE CALENDAR

Posting of RFI:	June 19, 2017
Information Session:	July 6, 2017; 9:00 AM; 1101 Market Street, 5 th Floor Conference Room
Deadline for questions, requests for clarification, or requests for additional information:	July 13, 2017
Response Due Date:	August 4, 2017

II. RFI CONTACT INFORMATION FOR QUESTIONS

All questions concerning this RFI must be submitted via email no later than 5 pm, Philadelphia, PA local time on July 13, 2017 and directed to:

Adam Hendricks
Philadelphia Water Department
adam.hendricks@phila.gov

Responses to such questions and requests shall be at the City's sole discretion and nothing in the RFI shall create an obligation on the City to respond to the submitting party or at all. In the City's sole discretion, responses may be posted on the City's website without formal notification to prospective Respondents.

The City, in its sole discretion, may issue addenda to this RFI containing responses to questions and requests for information, clarifications of the RFI, revisions to the RFI, or any other matters that the City deems appropriate. Addenda will be posted on the City's website at <http://www.phila.gov/rfp/Pages/default.aspx> ("Additional Opportunities"). It is the Respondent's responsibility to monitor the Additional Opportunities site for Addenda and to comply with their terms.

Oral responses by any City employee or agent of the City are not binding and shall not in any way be considered as a commitment by the City.

If a Respondent finds any inconsistency or ambiguity in the RFI or an addendum to the RFI issued by the City, the Respondent is requested to notify the City in writing.

III. BACKGROUND

The City of Philadelphia is the largest city in the Commonwealth of Pennsylvania and the fifth-most-populous city in the United States with over 1.5 million residents. The City encompasses approximately 134 square miles of land area. As an operating department of the City, the Philadelphia Water Department (PWD) provides integrated water, wastewater, and stormwater retail services to residential, commercial, and industrial customers.

PWD is committed to pursuing economically feasible energy independence and resource recovery at its facilities. In particular, biogas created from the anaerobic digestion process at the Southwest and Northeast Water Pollution Control Plants (WPCPs) is recovered and may be utilized onsite for heat, power generation, and as fuel for other plant processes. In addition, the biosolids created at the end of the anaerobic digestion process are further processed to create Class A biosolids and pellets for off-site fertilizer usage. Co-digestion involves the introduction of additional digestible organic material directly into the anaerobic digesters along with the solids from the wastewater treatment process, thereby increasing biogas production. For instance, PWD currently co-digests aircraft deicing fluid (ADF) in partnership with the Philadelphia International Airport. An additional organic waste that is a viable material for co-digestion is food waste.

Food waste, a subset of organic waste, is one of the largest categories of municipal solid waste (MSW) sent to landfills in the United States, accounting for approximately 21 percent of the waste stream after recycling. It is important to note that while both food waste and lawn and garden wastes can be composted, lawn and garden wastes cannot be easily co-digested in anaerobic digesters. Although data is still being collected and analyzed, the Philadelphia Streets Department estimates that the overall mass of discarded food waste in the City of Philadelphia is approximately 228,000 tons per year.

Legislation in the City of Philadelphia was revised in 2015 to require commercial generators of food waste to separate food waste from refuse, and to dispose of it in a manner that beneficially reuses the waste ([Philadelphia Code §10-722\(4\)\(d\)](#)). One compliance option includes the use of an additional dumpster to store source separated food waste for collection and to be used in “composting, anaerobic digestion, or... as farm livestock feed.” This change was made in order to increase the beneficial reuse of food waste, and divert it from landfills. Additionally, in December of 2016 Mayor Jim Kenney announced a City-wide goal of zero waste for 2035, and created a 16-member cabinet to create a zero waste and litter reduction plan by September of 2017. The recycling or beneficial use of food waste is critical to the City’s achievement of a zero waste goal.

PWD seeks to examine the alternative to the landfill disposal of food waste through the co-digestion of food waste at either the SW or NE WPCP. PWD has assessed anaerobic digester capacity for a pre-treated liquefied food waste and has determined that there is excess capacity, representing a prime opportunity for food waste co-digestion. PWD is now seeking to refine an implementable process by which a vendor could deliver a high quality liquefied food waste to the anaerobic digesters at a WPCP.

IV. PURPOSE OF REQUEST FOR INFORMATION

PWD is issuing this Request for Information to evaluate potential scenarios for the acceptance of pre-processed, liquefied food waste at one of the WPCPs. PWD is seeking information from potential vendors on how they have (or would) run such a program. If it is in the interest of the City, PWD is likely to start at the demonstration scale and expand the program over time. PWD is interested in respondents providing information about liquefied food waste, quality control, risk assessment/management, and the development of best management practices.

Information provided by Respondents may help to develop a future contract opportunity. This RFI will also help PWD to identify interest in such a contract opportunity. Responses to this RFI are considered non-binding and are used to assist the City in performing information gathering for planning purposes. Responses to this RFI could help shape future contract opportunities. Responding to the RFI is not a requirement for participation in future offerings, nor does it preclude an application from participating in a future opportunity.

V. INFORMATION REQUESTED

PWD is requesting interested vendors to submit a response detailing the process they would use to obtain, process, and deliver a liquefied food waste stream. Creative solutions that can be easily scaled are encouraged.

Listed below are aspects of the business plan that greatly interest PWD. Respondents are encouraged to address each of the categories listed below in their response to this RFI. Please include information regarding similar projects that you are involved in whenever possible. Responses for certain sections need not be specific to the Philadelphia region, but should exhibit an understanding of the complexities of food waste processing and co-digestion. If a Respondent's standards differ from what is listed below, Respondent should include an explanation of the difference including any potential benefits.

A. Collection of Food Waste

Should this program be developed, collection of food waste will be the responsibility of the vendor. PWD is interested in how collection will be undertaken. Include any pertinent experience, including that from other locales, in your responses to the following questions:

- a. Do you have experience collecting food waste? Please elaborate on your experience.
- b. Outline a basic process for the collection of food waste.
- c. From what type of facilities would you plan to source the food waste (i.e. supermarkets, restaurants, etc.)? What do you predict the make-up of the collected food waste to be (meat, dairy, vegetables, etc.)?
- d. Would facilities within Philadelphia or from outside of Philadelphia be targeted for food waste collection?
- e. How will the payment between the waste generator and hauler be conducted?
- f. How will the licensing required for hauling of this waste occur?

- g. What equipment would you expect to need related to hauling and pick-up of food waste? Do you already have this equipment or can you easily obtain it?
- h. What certainties can be provided to assure PWD that an agreed upon amount of food waste can be collected?

B. Pre-Treatment Process

Pre-treatment of the food waste stream will be required prior to delivery to PWD. Pre-treatment must be comprehensive enough to remove contaminants, including trash, plastics, and other such materials, from the collected food waste stream so that the processed waste stream is compatible with the PWD's anaerobic digesters. Commercial or industrial sources of fats, grease, or oils should not be incorporated into the processed waste stream unless directly related to food waste (i.e. no grease trap waste). Other contaminants may not be added to the food waste processed stream. Please use your experience in food waste pretreatment to answer the following questions, using examples as needed:

- a. Provide an outline of the steps involved in the pretreatment process. Please include types of equipment and manufacturers where applicable.
- b. The addition of excessive grit to PWD's digesters is a principal concern, as settling of this grit will occur in the digesters. Address specifically how you plan to reduce the grit content of the waste stream.
- c. What is the projected percent solids composition of the anticipated waste stream, both before and after processing? Include a maximum, minimum, and range of normal values.
- d. Describe the organic component, oil and grease content, and the ammonia and phosphate content you expect to be the food waste stream. Include any specific examples from other food waste you may have tested.
- e. Do you expect the processed waste be mostly hydrophilic, hydrophobic, or a mix? If it is a mix, what is the ratio of the mix? Would this change seasonally? How might the characteristics of the processed waste vary on any given day?
- f. Please describe the content and quantity of paper, plastic, grit, metal, bones, and any other substances removed from the collected food waste to create the processed food waste. What percentage of collected food waste is removed and treated as a separate waste?
- g. Do you already have a pre-treatment facility constructed? If so, what is its capacity and where is it located? If not, how would you accomplish pretreatment of the food waste?

C. Quality Assurance

A quality assurance process will be necessary to guarantee the quality of the product delivered to PWD.

- a. How do you anticipate controlling the quality of the food waste from generators?
- b. Provide an outline of your quality control process, including inspections, laboratory analysis, and oversight. PWD expects a contaminant-free food waste stream to be delivered.

- c. PWD prohibits specific contaminants from our sewage system. Any food waste stream will be expected to pass PWD's sewer discharge and pretreatment regulations (see Chapter 5 of PWD's Regulations).
- d. Have you rejected food wastes at any existing facilities? Under what circumstances would you reject a collection? How did you determine the need to reject the waste?
- e. Has your food waste, after being processed, ever been rejected by the receiving facility, and why?
- f. If PWD were to perform its own testing, analysis, and/or inspection of delivered product, what testing or analysis would you recommend to ensure high quality?
- g. Have you tested food waste for its Bio-methane Potential, via a BMP test? If yes, are you able to share some of your results?

D. Delivery to PWD

It is anticipated that the vendor will be responsible for delivering the pre-treated waste to a PWD facility. If by truck, PWD anticipates that deliveries would occur during the day. PWD needs to uniformly load its digesters so it would need to be able to anticipate the mass flow of material and have it stored on site to facilitate its 24 hour per day, 7 day per week operation.

- a. How would you plan to deliver the waste stream to PWD?
- b. Would deliveries occur only on weekdays, 6 days or 7 days a week?
- c. What variations in food waste delivery quantity should PWD anticipate? On what basis would these variations occur?
- d. What type and size of receiving facility would you expect to be at a municipal wastewater treatment plant? Please elaborate on the necessary components of such a facility. From your experience, provide examples of such receiving facilities.
- e. Would you expect any odor concerns or spillage during delivery? Would you anticipate that odor control be incorporated into the receiving facility?
- f. What impacts do you expect food waste delivery activities to have on the neighborhoods surrounding either the NE WPCP or SW WPCP?
- g. If such a receiving facility was not currently available, what business plan would you suggest be used to build it?

E. Business Plan

PWD assumes that the vendor will charge the food waste generator for the pick-up and processing of the food waste. PWD also assumes that it will be compensated for its part of the disposal pathway. Please elaborate on your proposed business plan that illustrates the future of this operation in Philadelphia.

- a. What is the minimum amount of food waste you need to deliver to PWD to make a project viable on a demonstration scale? Keep in mind that the demonstration scale could be in place for months or longer.
- b. Would you be willing to scale up over time starting from a demonstration scale? If so, provide your proposed plan for implementing the demo and full scale operation.
- c. Do you have a fee structure in mind that would be acceptable to your business plan? What is the basis of that fee structure (for example by weight, by volume, per truck)?
- d. What would your overall business organizational structure be in response to this opportunity?
- e. How have you handled liability issues? What is PWD's recourse if the waste stream contains contamination that compromises the anaerobic digestion process or the final biosolids pellets?

VI. SUBMISSION REQUIREMENTS

If you are interested in participating in this RFI, please answer the questions listed in previous section. Your response should follow the format provided below. Although we are anticipating a concise, poignant response, your response should be no more than 100 pages (1 inch margins, 12 pt. font):

Section 1:

- I. **Company Profile:** The Respondent must provide a profile of its company's operations, including: the number of years the company has been in business; number of full-time employees; and location of the office from which this contract will be managed. Please provide the company name, address, phone number, fax number, and internet address. If your response represents collaboration, please include the company profile of any partners as well.
- II. **Experience:** Respondents must describe their company's experience (and that of the relevant partners when applicable) with sourcing, collecting, and sorting waste streams. Include any experience with collecting food waste, and any specific experience that is similar to the process describe above. Elaborate on any problems that you may have encountered on other projects of this type, and how you worked to alleviate them.

Section 2:

III. Response to Questions

- a) Collection of Food Waste
- b) Pre-Treatment Process
- c) Quality Assurance
- d) Delivery to PWD
- e) Business Plan

Section 3:

IV. Impacts: Respondents should highlight any additional potential impacts to treatment plant or digester plant operations that they are aware of, and include any strategies that could be used to mitigate unforeseen challenges.

V. Timeline: Respondents must provide an estimated time frame to get the pre-processing facility constructed and in operation. Include the projected time from award of a contract to the first delivery of the waste product.

VI. Alternative Proposals: Respondents are encouraged to present any alternative plan that they anticipate would be better than the one suggested in the body of this RFI. The more detailed the response the easier it will be to evaluate, however, refrain from submitting proprietary information.

VII. USE OF RESPONSES

The Responses submitted by Respondents to this RFI may be used by PWD in the process of preparing a contract opportunity in order to enter into an agreement for the acceptance of a liquefied food waste stream. A contract opportunity may be proposed if PWD determined that the market was favorable to pursuing food waste co-digestion. A Response to this RFI is not a requirement to submit a proposal for the contract opportunity.

VIII. HOW TO SUBMIT

Applicants must submit their responses electronically as a single document to:

Adam Hendricks
Philadelphia Water Department
adam.hendricks@phila.gov

Responses are due by 5 pm, Philadelphia, PA local time on August 4, 2017.

IX. CONFIDENTIALITY AND PUBLIC DISCLOSURE

Respondents shall treat all information obtained from the City which is not generally available to the public as confidential and/or proprietary to the City. Respondents shall exercise all reasonable precautions to prevent any information derived from such sources from being disclosed to any other person. No other party, including any Respondent, is intended to be granted any rights hereunder. Respondents agree to indemnify and hold harmless the City, its officials and employees, from and against all liability, demands, claims, suits, losses, damages, causes of action, fines and judgments (including attorney's fees) resulting from any use or disclosure of such confidential and/or proprietary information by any Respondent or any person acquiring such information, directly or indirectly, from any Respondent.

X. RIGHTS AND OPTIONS RESERVED

In addition to the rights reserved elsewhere in this RFI, the City reserves and may, in its sole discretion, exercise any or more of the following rights and options with respect to this RFI if the City determines that doing so is in the best interest of the City:

1. to decline to consider any response to this RFI ("Response"); to cancel the RFI at any time; to elect to proceed or not to proceed with discussions or presentations regarding its subject matter with any Applicant and with firms that do not respond to the RFI; or to reissue the RFI or to issue a new RFI (with the same, similar or different terms);
2. to waive, for any Response, any defect, deficiency or failure to comply with the RFI if, in the City's sole judgment, such defect is not material to the Response;
3. to extend the Submission Date/Time and/or to supplement, amend, substitute or otherwise modify the RFI at any time prior to the Submission Date/Time, by posting notice thereof on the City web page(s) where the RFI is posted;
4. to require, permit or reject amendments (including, without limitation, submitting information omitted), modifications, clarifying information, and/or corrections to Responses by some or all Respondents at any time before or after the Submission Date/Time;
5. to require, request or permit, in discussion with any Respondent, any information relating to the subject matter of this RFI that the City deems appropriate, whether or not it was described in the Response or this RFI;
6. at any time determined by the City, to discontinue discussions with any Respondent or all Respondents regarding the subject matter of this RFI, and/or initiate discussions with any other Respondent or with vendors that did not respond to the RFI;

7. to do any of the foregoing without notice to Respondents or others, except such notice as the City, in its sole discretion, may elect to post on the City web page(s) where this RFI is posted.

This RFI and the process described are proprietary to the City and are for exclusive benefit of the City. Upon submission, Responses to this RFI shall become the property of the City, which shall have unrestricted use thereof. The City will not accept any information considered as confidential or proprietary information. Responses may be subject to public disclosure under the Pennsylvania Right-to-Know Law.

By submission of a response, Respondent acknowledge and agree that the City, as a municipal corporation, is subject to state and local public disclosure laws and, as such, is legally obligated to disclose to the public documents, including any response, to the extent required thereunder. Without limiting the foregoing sentence, the City's legal obligations shall not be limited or expanded in any way by a Respondent's assertion of confidentiality and/or proprietary data.