



CONNECTICUT MATERIALS MANAGEMENT INFRASTRUCTURE REQUEST FOR INFORMATION

NOTICE OF REQUEST FOR INFORMATION and PUBLIC LISTENING SESSION

February 9, 2023

I. Introduction

This Notice (Notice) of Request for Information (RFI) is being issued by the Connecticut Department of Energy and Environmental Protection (DEEP) to solicit information on materials management infrastructure – including disposal infrastructure, recycling infrastructure, and composting infrastructure – to meet the goals of the [2023 Draft Comprehensive Materials Management Strategy Amendment](#) of improving diversion of municipal solid waste for recycling and regaining self-sufficiency in managing municipal solid waste disposal within Connecticut’s borders. DEEP is seeking both (1) comment from interested stakeholders, municipalities, Councils of Governments, solid waste management industry representatives, facility developers, and others regarding the opportunities and needs associated with waste infrastructure development to help address Connecticut’s solid waste management challenges, and (2) concept papers from developers of infrastructure projects that can address those same challenges. DEEP is seeking comment and information on the best approaches to support waste infrastructure development, particularly in alignment with long-term contracts, siting, or complementary programs such as food scrap collection that are under municipal authority and control. DEEP looks forward to engaging with stakeholders throughout this process.

A. RFI Schedule

Release of RFI	February 9, 2023
Deadline to sign up to speak or present at Listening Session	March 10, 2023
Public Listening Session	March 14, 2023 at 10:00 am EST
Deadline for Submission of Concept Papers	April 14, 2023 at 5:00 pm EST
Deadline for Submission of Written Comments	April 14, 2023 at 5:00 pm EST

II. Background

A. Comprehensive Materials Management Strategy

On January 24, 2023, DEEP issued for comment a [Draft Amendment](#) to the state’s solid waste management plan, also known as the state’s Comprehensive Materials Management Strategy (CMMS).¹ Last updated in 2016, the CMMS established a roadmap to achieving Connecticut’s goal of 60 percent diversion of materials from disposal by 2024 by reducing waste, increasing reuse, recycling, composting, and focusing on the development of waste conversion technologies, such as anaerobic digestion (AD). In

¹ [Final Adopted Comprehensive Materials Management Strategy, Revised 12-14-2016 \(ct.gov\)](#)

support of that vision, the CMMS lists three goals: (1) improving the performance of municipal recycling programs and reducing waste, including increasing participation and compliance with mandatory recycling provisions, (2) developing and improving recycling and waste conversion technologies, and (3) encouraging corporations that design, produce, and market products to share responsibility for stewarding those materials in an environmentally sustainable manner.

The CMMS closely aligns materials management planning with Connecticut's climate action priorities, including greenhouse gas mitigation through waste reduction and diversion from landfill, and ensuring that clean energy and greenhouse gas mitigation priorities are at the forefront of the transition to next-generation materials management technologies. To achieve the diversion goal set by the legislature in 2014, Connecticut must reduce annual Municipal Solid Waste (MSW) by 10 percent and boost the statewide rate of recycling from 35% to 45%, as well as divert 300,000 tons of organic waste annually, including food scraps. The CMMS adheres to the state's waste hierarchy from subsection (b) of CGS §22a-228 which establishes an order of priority for managing solid waste: source reduction/reuse; recycling; composting of yard waste or food scraps; bulky waste recycling; resource recovery or waste-to-energy plants; incineration and landfilling.

In the wake of the Materials Innovation and Recycling Authority's (MIRA's) decision to cease operations at its resource recovery facility in Hartford in July 2022, Connecticut has significantly increased its reliance on out-of-state landfills for municipal solid waste disposal, in direct conflict with the statutory waste management hierarchy. To address this DEEP issued a Draft Amendment to the CMMS (CMMS Update) to identify opportunities for additional materials management infrastructure development in the State. The CMMS Update recommends implementation of diversion and recycling programs that can reduce the 860,000 TPY self-sufficiency deficit to 485,000 TPY over the next five to seven years.

DEEP is currently seeking comment on the CMMS Update, including the assumptions and conclusions with respect to the amount of new MSW disposal capacity needed in the state.² In parallel with the comment process on the CMMS Update, DEEP is issuing this RFI to better understand the features and characteristics of MSW infrastructure technologies and projects that could be deployed to restore self-sufficiency in MSW management within Connecticut, in alignment with the State's statutory waste management hierarchy. The comments and concepts received through this RFI can inform the recommendations in the final version of the CMMS Update with respect to the types of facilities that could be compatible with Connecticut's materials management needs and policies, as well as potential future procurements for new infrastructure that DEEP may facilitate or otherwise be involved in.

DEEP notes the following key considerations for the interplay of this RFI with the CMMS Update, as well as other legislative and policy processes underway at this time.

How much, and what type of waste infrastructure capacity is needed in the state?

- As noted above, the draft CMMS Update proposes certain diversion and recycling programs capable of reducing the state's self-sufficiency deficit from 860,000 TPY to 485,000 TPY over the next five to seven years. Through the comment process, DEEP is seeking input from stakeholders about the efficacy of recommended programs, the feasibility of achieving such a reduction, and

² More information can be found at: <https://portal.ct.gov/DEEP/About/Public-Notices>.

alternative approaches that could achieve greater reductions. DEEP will consider such comments thoroughly.

- The diversion and recycling programs identified in the CMMS Update will require, to a significant extent, legislative authorization in order to move forward. Governor Lamont has introduced [Governor's Bill 6664 An Act Managing Waste and Creating a Waste Authority](#), if adopted the legislation would authorize the programs identified in the CMMS Update. The General Assembly may raise bills that would achieve reductions through alternate programs or approaches.
- DEEP will consider the outcomes of the legislative session, as well as comments received on the draft CMMS Update, when finalizing the CMMS Update and its conclusions with respect to the amount of additional waste disposal capacity needed in the state to regain self-sufficiency. For example, if the General Assembly declines to authorize additional waste diversion and recycling programs, for example, the amount of capacity needed could be much closer to 860,000 TPY. If more diversion programs are authorized, the capacity need could be less than the 485,000 TPY estimated in the CMMS Updated.

What procurement activity will follow from this RFI?

- As noted in the draft CMMS Update, waste disposal and processing facilities derive revenues from a variety of sources. Tip fees paid by municipalities or haulers constitute the majority (roughly two-thirds) of revenues, supplemented by revenues from the sale of energy, environmental attributes, metals recovery, and other byproducts. The draft CMMS Update seeks comment on the best approaches for financing new waste infrastructure in the state.
- The CMMS Update also notes that the development of collection programs for source-separated organics is critical for supporting investment in anaerobic digestion and other organics processing facilities. DEEP is administering a Sustainable Materials Management (SMM) grant program for that purpose and recommends scaling up that program with additional funding.
- Long-term tip fee agreements backstopped by municipalities, aggregated by or acting through Regional Waste Authorities, have historically provided the “anchor” for financing of waste-to-energy facilities in the state. DEEP is offering grant support for municipalities wishing to join an existing or establish new RWAs, including for the purpose of developing new waste infrastructure.³ In addition, DEEP will seek participation from municipalities and RWAs in a DEEP-facilitated RFP for multi-year tip fee agreements for new waste infrastructure in the state, informed by the results of this RFI.
- Anaerobic digesters, which may be standalone or a component of new waste infrastructure projects or integrated with existing waste infrastructure. Anaerobic digesters produce biogas which can be converted to electricity (eligible as a Class I renewable in the CT Renewable Portfolio Standard) with a combined heat and power unit. DEEP has authority to procure electricity and environmental attributes for up to 10 MW from anaerobic digesters that are animal feeding operations and collocated on land used for the purpose of farming under Section 16a-3p of the General Statutes and has authority remaining under Section 16a-3h for approximately 6 MW from anaerobic digesters.⁴ DEEP intends to explore through this RFI

³ More information can be found at: <https://portal.ct.gov/DEEP/Reduce-Reuse-Recycle/Municipal-Recycling-Resource-Center/Municipal-and-Regional-Grants-and-Technical-Assistance>.

⁴ [Chapter 295 - Energy Planning \(ct.gov\)](#)

whether and how to utilize existing procurement authority as part of any facilitated procurement for waste infrastructure. Alternatively, biogas can be converted to vehicle fuel or sustainable aviation fuel (which is eligible for tax credits under the federal Inflation Reduction Act).

- DEEP appreciates the leadership of the legislative Solid Waste Management Working Group, (Working Group) convened pursuant to [Special Act 22-11](#). The Working Group has spurred public consideration of different types of waste disposal technologies, and potential financing needs and arrangements for such facilities, including different forms of energy offtake agreements. DEEP will monitor any legislative outcomes associated with the Working Group's activities.

B. Siting and Permitting

All applicants seeking a permit for an affecting facility proposed to be located in an environmental justice community must file an Environmental Justice Public Participation Plan and receive approval from DEEP prior to filing any application for a permit.

The solid waste facility permitting program regulates activities related to solid waste disposal or waste processing activities, including storage, transfer, volume reduction, recycling, and incineration.⁵ In reviewing a permit application, DEEP ensures that all proposed solid waste facilities provide for proper planning, design, construction, operation, monitoring, closure and post-closure maintenance to safeguard health and safety and protect the environment.

Facilities receiving food waste generated elsewhere are a category of solid waste facility and require a solid waste permit under CGS § 22a-208a. There are several current authorization pathways⁶ for food waste management for municipal, commercial or private facilities to receive, transfer and process food waste. Depackaging of food waste and satellite collection locations are also authorized under certain conditions.

There are streamlined authorization pathways for the management of food waste through collection and transfer or receipt and processing/composting of organic materials that apply to on-farm AD⁷ of food waste and manure and exempt them from solid waste permitting if the facility meets the requirements outlined in CGS §22a-208cc.⁸

C. Integrated Resources Plan: 2022 Procurement Plan

Connecticut's Integrated Resources Plan (IRP) identifies resource needs for a clean, affordable, and reliable electricity supply for the state.⁹ The most recent IRP was completed in 2020 and included

⁵ [Waste and Materials Management Permits and General Permits \(ct.gov\)](#)

⁶ [Current Permit Authorization Pathways for Food Waste Management \(ct.gov\)](#)

⁷ [Farm-Anaerobic-Digester-Factsheet.pdf](#)

⁸ [Current Permit Authorization Pathways for Food Waste Management \(ct.gov\)](#)

⁹ Conn. Gen. Stat. § 16a-3a

extensive modeling and analysis of strategies to achieve six key objectives, including: (1) decarbonizing the electricity sector, (2) securing the benefits of competition and minimizing ratepayer risk, (3) ensuring energy affordability and equity for all ratepayers, (4) optimal siting of generation resources, (5) upgrade the grid to support and integrate variable and distributed energy resources, and (6) balancing decarbonization and other public policy goals.¹⁰ The 2020 IRP included a schedule for future procurements of electricity supply and called for updating that schedule at least annually to account for any contingencies or changed conditions.

DEEP recently conducted a review of contingencies and changes since the 2020 IRP and found several changed conditions warranting actions to address barriers to the procurement of electricity supply resources, including solid waste management challenges affecting the supply of relevant Class II and Class I resources in the waste sector.¹¹

D. Relevant Energy Policy Incentives

The state also has energy policy incentives to support the deployment of AD facilities. These facilities qualify for Class I renewable energy certificates (RECs)¹² and can participate in the Non-Residential Renewable Energy Solutions (NRES) program for on-site resources.^{13 14} The NRES Program is a successor commercial clean energy program to the Low Emission Renewable Energy Credit, Zero Emission Renewable Energy Credit and Virtual Net Metering programs that combines the three programs into one program. A renewable generator, such as an AD facility, can also participate in the wholesale energy market. In the wholesale market a generator can either contract to sell its energy “bundled” with the accompanying REC directly to an electricity provider, or “unbundled” and sell the REC and the energy separately.

III. Request for Concept Papers

At this time, DEEP is requesting written concept papers from developers interested in pursuing waste infrastructure projects, to further inform the types of technologies, site and financing needs, etc. for a forthcoming facilitated RFP, which could include transfer stations, anaerobic digestors, other composting facilities, recycling facilities, and various types of waste disposal technology. Developers are asked to provide high level concepts that address the questions below.

¹⁰ <https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/2020-Connecticut-Integrated-Resources-Plan-10-7-2021.pdf>

¹¹ <https://portal.ct.gov/-/media/DEEP/energy/IRP/2022-Procurement-Plan-Update.pdf>

¹² [RECs are tradable commodities that allow the environmental attribute of the renewable energy to be bought and sold separately from the energy commodity itself](#)

¹³ [Renewable Portfolio Standards Overview \(ct.gov\)](#)

¹⁴ [Non Residential Renewable Energy Solutions Program \(ct.gov\)](#)

A. Concept Paper Elements

Please describe your proposed project, addressing as many of the questions below as possible. DEEP encourages proposers to limit submissions to no more than twenty (20) pages. The deadline for the submission of concept papers is **Friday, April 14, 2023 @ 5:00 PM**

Site Characteristics and Facility Details

1. What type of solid waste processing operation are you interested in developing in Connecticut?
2. Please describe in detail the technology proposed, and potential capacity and throughput in tons per day and tons per year. Please describe how your project is consistent with the State's solid waste hierarchy and the state's goal of 60 percent diversion from landfill and combustion.
3. What kinds of site characteristics are needed for your operation?
 - a. Acreage needs
 - b. Utility connection availability needs and facility usage requirements including, power, water, sewer, and gas
 - c. Access needs including transportation modes and proximity requirements (road, rail, port, etc.)
4. What are the input and output requirements to make development feasible?
 - a. Inputs
 - i. What type of feedstock is required for your facility?
 - ii. Are there any specific characteristics needed to make the feedstock viable or processing limitations (e.g., food scraps must be source separated)?
 - iii. What are the tonnage/ volume needs to make your facility viable? Provide a range or a minimum if applicable.
 - iv. Can you provide tip fee estimates?
 - b. Outputs
 - i. What are the outputs of your process (e.g., electricity, renewable natural gas, compost, baled material, etc.)?
 - ii. What minimum revenues or revenue guarantees do you need for these outputs?
5. What are the environmental attributes associated with your facility?
 - a. Air emissions, and mitigation thereof
 - b. Discharges, including where discharges will occur and mitigation of discharges
 - c. Waste material or residuals and description of disposal of such materials
 - d. Beneficial uses
 - e. Other
6. Please describe how the project will minimize negative environmental and health impacts of waste management, including minimizing greenhouse gases.

Community Benefits

7. Please describe host community benefits that would be provided as part of your project, and how those benefits would be shared or realized including job creation and workforce training opportunities.

Developer Experience

8. Please describe the project team's background and experience developing waste infrastructure projects, including the proposed technology, and your track record for successful development and/or operation. Please provide information on applications of the proposed technology demonstrating how widespread and how the technology has been proven through other development projects.

Financing Arrangements

9. Please describe the preferred and acceptable financing arrangements contemplated for the project, including contemplated financing, development, ownership, and operation of the facility; and needed commitments (including duration thereof) from municipalities and other entities with respect to tip fees, and the marketing of other materials and byproducts of the project.
10. Does the project contemplate any energy or environmental attribute offtake agreements under state jurisdiction, or federal funding of any type?
11. How will the proposed financing arrangement ensure stable and competitive pricing for municipalities?
12. Within what approximate time frame (years) of contract execution would the project be able to commence operation, assuming timely state and local approvals?
13. Please provide information on technology performance guarantees by the technology provider or project developer.

Procurement of Anaerobic Digestors

DEEP is requesting written public comments on the following questions and topics relating to the deployment of AD resources in Connecticut or other related topics not listed below:

14. Should DEEP initiate a new procurement for long-term power purchase agreements for electricity and RECs from anaerobic digesters? Should/could such an RFP be coordinated with municipal RFPs for organics diversion services?
15. If DEEP were to conduct a procurement for energy and RECs associated with anaerobic digestors:
 - a. What is an appropriate minimum and maximum facility size in MW capacity and or tonnage of waste?
 - b. What requirements or standards should the procurement put in place for feedstock used at the anaerobic digestors, and how would bidders demonstrate a commitment to any such feedstock requirements and ongoing compliance?

- c. What considerations should inform any policy for renewable natural gas procurement from anaerobic digesters?

B. Confidentiality

If a Respondent wishes to submit commercially sensitive or financial information to the Department that is of a confidential nature, please recognize that the Connecticut Freedom of Information Act governs the public's access to information. This law generally requires the disclosure of documents in the possession of the State upon request of any citizen, unless the documents are specifically exempt from disclosure.

All information submitted to DEEP will be considered a public record unless a respondent requests confidential treatment of materials submitted pursuant to the procedure below. If a respondent believes that portions of the information that it submits are exempt from FOIA disclosure, the respondent must submit:

- One complete response to this RFI for public posting with all claimed confidential material redacted, which must be clearly labeled PUBLIC, and
- One complete, unredacted response to this RFI for DEEP's internal review, which must be clearly labeled CONFIDENTIAL on each page.

Respondents must also indicate which FOIA exemption may be applicable to the specific information claimed confidential. A list of FOIA exemptions can be found at CGS § 1-210. Examples of FOIA exemptions include, but are not limited to:

- Trade secrets;
- Commercial and Financial information given in confidence, not required by statute;
- Responses to any request for proposals or bid solicitation issued by a public agency or any record or file made by a public agency in connection with the contract award process, until such contract is executed or negotiations for the award of such contract have ended, whichever occurs earlier, provided the chief executive officer of such public agency certifies that the public interest in the disclosure of such responses, record or file is outweighed by the public interest in the confidentiality of such responses, record or file; and
- Public records exempt under federal law or state statute.

With your legal support and reasonable justification for confidentiality as described herein, the Department is better equipped to safeguard your confidential information should it become the subject of a Connecticut Freedom of Information Act inquiry.

IV. Request for Public Comment

DEEP is issuing this RFI to initiate discussion with stakeholders about the available infrastructure options to meet the diversion goals of the CMMS, reduce the reliance on out-of-state disposal facilities to manage Connecticut's waste, and improve alignment with the statutory waste management hierarchy.

In addition to the request for concept papers, above, the Request for Information also seeks general comment from any stakeholder on the questions below.

A. Questions for Public Comment

1. What types of facilities should be eligible or preferred for a waste infrastructure procurement? Including but not limited to the following: Materials Recovery Facilities, Mixed Waste Processing Facilities (to separate organics from post-recycled MSW and/or otherwise preprocess waste for further conversion or use); Anaerobic Digestion; Commercial Composting Facilities; Gasification (including plasma arc, pyrolysis, and other forms of gasification); Other conversion processes that convert waste to renewable fuel, chemicals, electricity, or other usable products.
2. How can DEEP promote statewide accessibility of infrastructure and services to help reduce transportation costs?
 - a. Optimal facility size
 - b. Reasonable radius for collection and transportation
 - c. Opportunity for sustainable fuel supply
3. How should waste infrastructure projects be financed, owned, or operated so as to provide stable and competitive pricing for municipalities?
4. What types of host community benefits and commitments should be provided for as part of a waste infrastructure project?
5. How should new waste infrastructure make use of existing patterns of municipal and subscription-based collection services for waste and recycling?
6. What are the best models or opportunities for affordable organics collection, including regional coordination and co-collection?
7. What procurement strategies have worked effectively to attract bids/ investment from infrastructure developers or haulers?
8. How can DEEP, municipal hosts, and developers implement best practices to minimize impacts of solid waste infrastructure and services on Environmental Justice communities?
9. Please provide any other comments or suggestions on any additional comments that DEEP should consider as part of this RFI process.

B. Public Listening Session

By way of this Notice, DEEP is announcing that it will hold a public listening session on **Tuesday, March 14, 2023, at 10:00 am via Zoom**. DEEP will provide brief introductory remarks and any needed clarification to interested stakeholders on the questions raised in this RFI. DEEP will look to hear from stakeholders on recommendations and views related to best approaches to support waste infrastructure development in Connecticut. Those interested in attending the meeting may register via Zoom. **DEEP requests interested persons to contact Elizabeth.Moore@ct.gov by March 10, 2023, to reserve time to speak and/or present at the listening session.**

[Click here to register for the Public Listening Session via Zoom.](#)

C. Comment Submission Deadline

Written comments may be filed via email on or before **Friday, April 14, 2023, at 5:00 pm**. Comments and questions should be emailed to DEEP.MMCAPlanning@ct.gov with the subject line “Response to Waste Infrastructure Request for Information.”

V. Additional Information

Materials related to this RFI will be available on the [Comprehensive Materials Management Strategy \(ct.gov\)](#) website, including posting of public comments received pursuant to section IV of this RFI, and public versions of concept papers received pursuant to section III of this RFI. For more information, please contact DEEP.MMCAPlanning@ct.gov.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact us at (860) 418-5910 or deep.accommodations@ct.gov if you: have a disability and need a communication aid or service; have limited proficiency in English and may need information in another language; or if you wish to file an ADA or Title VI discrimination complaint. Any person needing a hearing accommodation may call the State of Connecticut relay number - 711. Requests for accommodations must be made at least two weeks prior to any agency hearing, program, or event.