REQUEST FOR EXPRESSIONS OF INTEREST (RFEI) TO PERMIT, DESIGN, BUILD, OPERATE AND MAINTAIN AND MARKET THE CAPACITY OF AND PRODUCTS FROM A REGIONAL MUNICIPAL WASTEWATER BIOSOLIDS FACILITY

Issued by WATER POLLUTION CONTROL AUTHORITY BOROUGH OF NAUGATUCK, CONNECTICUT March 2016



(Photo courtesy of Veolia web site)

Request for Expressions of Interest

Borough of Naugatuck

Expressions of Interest will be received by the Department of Public Works, Borough of Naugatuck, 246 Rubber Ave. Naugatuck CT. 06770 for supplying the Borough of Naugatuck with the following expression of Interest:

Request for Expressions of Interest (RFEI) To Permit, Design, Build, Operate and Maintain and Market the Capacity of and products from A Regional Municipal Wastewater Biosolids Facility, Naugatuck, CT.

The Request for Expressions of interest (RFEI) and related documents are available at no cost from the Borough of Naugatuck web site http://www.naugatuck-ct.gov

Addenda if required shall be posted on the <u>http://www.naugatuck-ct.gov</u> web site. It is the respondent's responsibility to check the Town web site in advance of the RFEI opening to determine if any addenda have been issued.

A pre-submittal meeting and site tour will be held on March 29, 2016 at 10:00 at the Wastewater Treatment Facility, 500 Cherry Street, Naugatuck, Ct. 06770. Attendance is not mandatory, but is encouraged.

Responses to the RFEI will be received by the Department of Public Works, 246 Rubber Ave. Naugatuck CT. 06770 until **Wednesday, June 1, 2016 at 3:00 P.M. local time**.

The Borough of Naugatuck reserves the right to waive any informalities.

The Borough of Naugatuck is an affirmative action/equal opportunity employer, MBE's, WBE's and SBE's are encouraged to submit.

Table of Contents

1.0	Introduction	1
2.0	Background	2
3.0	Project and Site Description	3
4.0	Project Goals	5
5.0	Schedule	6
6.0	Review Process	7
7.0	Submission Requirements for Expressions of Interest	8
8.0	Expense of RFEI Process	11
9.0	Questions, RFEI Submission and Contact Information	11

Attachments

Attachment 1: Biosolids Information Attachment 2: Site Drawing

1.0 INTRODUCTION

The Water Pollution Control Authority, Borough of Naugatuck, Connecticut (Borough) is currently implementing a long-term plan to upgrade its wastewaterwater treatment plant to a "resource recovery facility", including efforts to beneficially use biosolids, recover energy to reduce its dependendence on the grid, recover nutrients and find uses for its effluent. As part of that plan, the Borough is seeking responses to this Request for Expressions of Interest (RFEI) from qualified companies for services to permit, design, build, operate and maintain, and market the excess capacity of and products from a regional, municipal wastewater biosolids processing facility (herein referred to as Services and Biosolids Facility) . The Biosolids Facility will provide for the long-term management of biosolids from the Borough's wastewater treatment plant (Wastewater Treatment Facility) and from other municipalities and private parties.

The design capacity of the Wastewater Treatment Facility is 10.3 MGD. Currently biosolids from the Wastewater Treatment Facility and from other municipalities and private entities are incinerated in a fluid bed incinerator (Incineration Facilities) which is permitted to process 84 dry tons per day of biosolids, providing significant excess capacity for merchant biosolids. Associated merchant revenues provide the economic incentive for an existing public private partnership that provides significant cost savings to the Borough.

Although not the subject of this RFEI, in the future, the Borough may request additional services, including the operation of the Wastewater Treatment Facility and the Borough's sanitary sewer collection system. This RFEI is focused on the Incineration Facilities and associated solids handling systems only.

The Borough requests that companies interested in providing biosolids management services provide a response to this RFEI in accordance with information provided herein. Also, as noted below, interested companies are encouraged to attend a Non-Mandatory, Pre-Submittal Information Meeting and Site Visit scheduled for March 29, 2016 at the Wastewater Treatment Facility.

This is not a formal solicitation. The purpose of this RFEI is to gather information from interested companies to assist the Borough in determining the level of private interest, the potential technologies and approaches that companies would take to provide the requested services and the economic viability of developing the Biosolids Facility. Should there be sufficient private interest and the Borough find that its interests are being served, the Borough will, in a subsequent step, issue a formal, Request for Proposals (RFP) to solicit technical and price proposals. Companies are encouraged to respond to this RFEI to ensure that the Borough is considering all viable technologies; however, companies that do not respond to this RFEI will not be precluded from responding to a subsequent RFP.

2.0 BACKGROUND

As noted above, the Wastewater Treatment Facility has a design capacity of 10.3MGD. It includes secondary treatment and nitrogen control. In Fiscal Year 2015 (FY2015: July 2014-June 2015) it treated an average of 5 million gallons per day of sewage from Naugatuck and sewer connecticed communities (Middlebury, Oxford and parts of Beacon Falls and Prospect). The Wastewater Treatment Facility also receives septage from the Borough and other communities and private parties. In FY15 approximately 3 million gallons of septage was received without charge from the Borough and connected communities, and approximately 6.5 million gallons of septage was received from other communities and private parties that paid for treatment services.

Currently, biosolids from the Wastewater Treatment Facility are thickened and then dewatered at the Incineration Facilities using centrifuges (belt filter presses as backup). Five out of eight sludge thickening tanks are included as part of the Incineration Facilities for merchant sludge processing, the balance are part of the Wastewater Treatment Facility for thickening Naugatuck primary and waste activated sludge. After dewatering, biosolids are dried in a "scalping" dryer and incinerated in a fluid bed incinerator. Ash is stored in on-site ash lagoons and subsequently disposed of at approved landfills. When the incinerator is taken off line for maintenance, alternative disposal methods are required. During these times, biosolids are transported and disposed of at approved landfills or other incinerators.

The Incineration Facilities accept biosolids in both liquid and cake form. As noted above, liquid biosolids are dewatered. Cake biosolids are processed directly. The existing fluid bed incinerator is permitted to incinerate 84 dry tons per day of biosolids. It is fairly new, installed in 2003/2004. The majority of the incinerator capacity is utilized for biosolids from outside sources (Borough biosolids production from the Wastewater Treatment Facility is typically 2-4 dry tons per day, leaving approximately 80 dry tons per day of capacity for merchant use). Currently more than 50 communities utilize the Incineration Facilities , primarily in Connecticut, and some in New York and Massachusetts. As further explained below, revenues from these customers are used to offset a significant amount of the costs of past capital improvements, including those for installation of the fluid bed incinerator, and a majority of operating and maintenance costs.

Information on biosolids and other feedstocks received predominantly in Fiscal Year 2015 is referenced in Attachment 1 to this RFEI. Annual biosolids incinerated in FY 2015 were 26,690 dry tons per year from Naugatuck and outside sources. This represents about 88% of permitted incinerator capacity. Approximately 50% of the biosolids received were in liquid form and 50% in solid form.

The Wastewater Treatment Facility and Incineration Facilities are operated by a private company (Veolia) under a twenty year contract which ends in August 2022. The Borough

leases the site and facilities to Veolia, which in turn, pays rent to the Borough for rights to the revenues from the biosolids customers. The rent payments made by Veolia offset approximately ½ of the costs for past capital improvements (including the fluid bed incinerator) and a majority of operating and maintenance costs for the Wastewater Treatment Facility. There is no cost assessed the Borough by Veolia for operation of the Incineration Facilities nor charged the Borough for biosolids processing. In FY2015, rent payments stipulated by contract were approximately \$4.26 million. There is also a "profit sharing" arrangement whereby the Borough receives payments if revenues exceed specified costs, including the costs for operating the Incinerator Facilities .

Number 2 fuel oil is purchased from independent suppliers for use in the Incineration Facilities. Electricity used at the Wastewater Treatment Facility and Incineration Facilities is purchased from the grid. In FY 2015, electricity use was approximately 14 million kWh and fuel use was 71,529 gallons. Costs for electricity were approximately \$1.3 million. Fuel costs were approximately \$150,000 . Approximately 25% of electricity use was at the Wastewater Treatment Facility and the balance at the Incineration Facilities. All of the fuel was used at the Incineration Facilities.

The Borough is in the process of upgrading the Incineration Facilities to meet EPA Sewage Sludge Incinerator emission requirements, primarily for mercury. These improvements are expected to be completed in two years. To meet these requirements, a polymer absorption system is being added to the existing air pollution control equipement.

There are also future requirements to meet phosphorous effluent limits as specified in the NPDES permit for the Wastewater Facility. A seasonal (214 days per year) treatment performance limit of 0.4 mg/l results in limits of an average daily load of 16.43 lbs/day and a total seasonal load of 3,516 lbs. In addition there is a maximum daily limit of 1.24 mg/l and an average monthly limit of 0.552 mg/l. Although the Wastewater Treatment Facility is not part of this RFEI process, the Borough is very interested in biosolids management technologies that are compatable with or are capable of recovery of phosphorous and nitrogen for beneficial use.

A Facilities Plan is currently being prepared. Some \$85 million of capital improvements are being considered, including meeting the regulatory requirements noted above and making other improvements for increased efficiency, reduced energy use, odor mitigation, provision of a headworks and replacing aging equipment.

3.0 PROJECT AND SITE DESCRIPTION

The Biosolids Facility proposed by interested companies must be capable of reliably processing all of the Borough's biosolids and of a size to provide adequate merchant revenues to significantly offset Borough costs, be permittable, and be capable of meeting or exceeding Borough, Connecticut and Federal regulatory requirements. The Borough will consider a smaller or a larger facility than currently exists, should such a facility meet environmental standards and be beneficial to the Borough. The Borough is also willing to consider acceptance of fats, oil and grease, green waste and food waste at the Biosolids Facility, should environmental standards be met and should it be beneficial to the Borough. The Borough is open to and will consider all viable technologies. The Biosolids Facility can include alternative technologies such as thermal hydrolysis, anaerobic digestion, drying, pelletization, composting, gasification, or continue incineration, using existing facilities or installing new incineration facilities. If a product is produced, it is to meet Part 503, Class A requirements. Services would commence with adequate time to allow permitting and development of the Biosolids Facility with operation to begin by August 2022. Once operation commences, a 20 year operating term is anticipated. (NOTE: The Borough is aware of State DEEP regulatory practices limiting use of processed biosolid products produced in Connecticut, and the need for a Beneficial Use Determination to do so. The Borough is in discussion with DEEP regarding this matter.)

Space is available on the Wastewater Treatment Facility and Incineration Facilities site, and/or on 8 acres adjoining the site. If additional space is needed, there is the potential for additional space next to the adjoining 8 acre parcel. Existing, inactive rail lines adjoin the 8 acre site. Their use to serve a Biosolids Facility is not certain and would need to be investigated. See Attachment 2 for references to a site drawing. The Borough may retire the existing incinerator if a Biosolids Facility using alternative technology is selected. In that case, the Borough may make the incinerator and ash lagoon space available for use in conjunction with or as part of the Biosolids Facility, should such use be beneficial to the project. The ash lagoons comprise approximately 2 acres.

Implementation of the Biosolids Facility is envisioned as a public-private partnership, ("PPP").

The Borough will:

- Provide financing for and own the Biosolids Facility, if advantageous to the Borough.
- Lease the Biosolids Facility to the successful company under terms of a long-term lease (minimum of 20 years and up to 30 years)
- Lease existing equipment used at the Incineration Facilities, e.g., storage facilities, dewatering facilities, etc. to the successful company under terms of a long-term lease (minimum of 20 years and up to 30 years)
- Provide the site for the Biosolids Facility under terms of a long-term lease (minimun of 20 years and up to 30 years) using available land at the Wastewater Treatment Facility and Incinerator Facilities, and 8 acres of adjoining space.
- Commit on a long-term basis (minimum of 20 years and up to 30 years) the Borough's biosolids production to the Biosolids Facility. The Borough intends to provide thickened biosolids produced at the Wastewater Treatment Facility. The company will be responsible for accepting the thickened biosolids output, dewatering as necessary and conveying/transporting the biosolids to the Biosolids Facility for subsequent processing.

- Allow use of the Wastewater Treatment Facility , if needed , for purposes of receipt or treatment of incoming feedstock and for discharge of pretreated wastewater from the Biosolids Facility .
- Facilitate making arrangements for "sharing" employees, as available, between the Wastewater Treatment Facility operator and the Biosolids Facility.

The company will:

- Permit, design, build, operate and maintain all necessary facilities required to receive, store and process all biosolids provided by the Borough and acceptable feedstock from merchant customers, and market excess capacity of and all products from the facility. Construction activities will include all site preparation work that is necessary. If produced, products must meet Part 503, Class A requirements.
- Comply with all Federal, Connecticut and Borough requirements for all services related to the Biosolids Facility.
- Make rent payments to the Borough and provide for a profit sharing plan.

4.0 PROJECT GOALS

The Borough desires to achieve the following:

- A long-term reliable and economically viable project.
- Cost savings to the City, with potential for profit sharing. (Cost savings would be provided through a rent payment to be offered by the company to the Borough which the Borough could use to help meet its costs, e.g., for debt payments for the Biosolids Facility and the cost of operating the Wastewater Treatment Facility. Operating and maintenance costs for the Biosolids Facility should be considered the responsibility of the company, including the cost of processing Borough biosolids.)
- Utilization of technology that will produce enviornmental benefits, such as reducing greenhouse gas emissions.
- Improvement of odor conditions at the Incineration Facilities to eliminate/mitigate odors associated with receipt and processing of merchant feedstock.
- Generation of renewable fuels, electricity or other marketable, beneficial products.
- Utilize, as appropriate, combined heat and power processes to more efficiently utilize the potential fuel value of the biosolids.
- Provide heat and power to the Wastewater Treatment Facility or other users to offset needs to purchase fuels and electricity from the grid.
- Recover nitrogen and phosphorous for beneficial use.

5.0 SCHEDULE

The Borough has developed a tentative schedule of activities for the Biosolids Facility.

Activity	<u>Schedule</u>
Release Request for Expression of Interest	On or about March 1, 2016
 Non-Mandatory Pre-Submittal Meeting and Site Tour 	March 29, 2016, 10:00 AM at Wastewater Treatment Facility, 500 Cherry Street, Naugatuck, Connecticut 06770. (Parking is available at the Wastewater Treatment Facility)
 Submission of Written Company Questions 	At any time, but no later than May 16, 2016.
Borough Response to Questions	As soon as practical via written Addenda to the RFEI.
 Due Date for Submitting Expressions of Interest 	June 1, 2016, 3:00 PM Local Time
 Borough Completes Review of Expressions of Interest (Please note that as part of the review, the Borough may request that a company(ies) participate in an interview.) 	July 31, 2016
 Subsequent Steps: Borough Issues RFP; Evaluation of Proposals/Selection of Preferred Proposer; Contract Negotiations 	Complete by June 2019
Award of Contract	July 2019
Commence Operations	August 2022

6.0 **REVIEW PROCESS**

The Borough reserves the right to, at its sole discretion, exercise any or all of the following: accept or reject any and all submittals, in whole or in part; amend or modify the terms included in this RFEI and subsequent selection process described below; cancel this RFEI and issue subsequent RFEIs, RFQs, RFPs and/or RFQPs; and invite interested companies who did not participate in this RFEI process to participate in any competitive procurement process at later stages described in this section.

The Borough reserves the right to consider all technologies for the Biosolids Facility based on the responses received to this RFEI, or other information gathered by the Borough.

Information submitted in response to this RFEI should be considered public information.

The Borough intends to use the process outlined below to consider offers for the Services.

1. Request for Expressions of Interest (RFEI)

This RFEI is intended to solicit preliminary responses from companies that have experience in permitting, designing, building, operating and maintaining and marketing the capacity of and products from biosolids processing facilities, and demonstrating a history of conducting such activities. Responses to this RFEI will be utilized to assist in determining if a project is potentially viable and may meet the Borough's needs, in identifying if there is sufficient market interest from qualified companies and technologies that can potentially provide a technically, environmentally and cost effective viable project thereby allowing a competitive procurement process, and in providing information to assist the Borough in developing the subsequent RFP.

2. Request for Proposals (RFP)

Should the Borough move forward with procurement of the Services, an RFP will be issued. It is anticipated that the technical proposals would be evaluated based on the worthiness of the proposed technology, environmental benefits, experience, qualifications, resources, and financial strength of the Proposer, conformance to proposed terms and conditions of contract, and other appropriate non- price criteria. Price proposals would be evaluated separately. A value analysis would then be conducted to determine which Proposal is in the best interests of the Borough, considering both the technical and price proposals. The Borough would not be required to accept the lowest priced proposal. The top ranked proposer would be selected as the "Preferred Proposer" to enter into contract negotiations.

The RFP process will be subject to applicable procurement law and to equal opportunity, insurance and bonding requirements as specified by the Borough.

3. Negotiation with Preferred Proposer

It is the Borough's intent, in accordance with terms to be contained in the RFP, to enter into contract negotiations with the Preferred Proposer to reach an agreement in accordance with key terms and business principals contained in the RFP. If after a reasonable time the Borough is unable to reach agreeable terms with the Preferred Proposer, it will terminate the negotiations and enter into negotiations with the next highest ranked proposer. Although this is the expressed intent of the Borough, the Borough will maintain its rights to enter into negotiations with more than one company, should that be deemed to be beneficial to the Borough.

7.0 SUBMISSION REQUIREMENTS FOR EXPRESSIONS OF INTEREST

To the extent possible, responses to this RFEI shall be printed on 8 $\frac{1}{2}$ x 11" pages. Bulky materials and oversize drawings should be included in an Appendix to the body of the RFEI response. The RFEI response should include the following information:

1. Provide a general description of the lead responding company with contact information for the lead company (name, title, mailing address, email address, telephone and fax numbers). In addition, for key project participating firms, provide name of design engineering firm, construction contractor, operator, environmental permitting consultant, and investment banker or funders.

2. Include a brief synopsis of the history, expertise, and experience of the lead company and that of its principal project participating partners, if any. Describe the experience of the team in working together previously for similar projects as that proposed in Naugatuck.

3. Provide copies (*ON CDs ONLY-NO PAPER COPIES*) of the last 3 years of Annual Reports if a publicly traded company, and comparable financial information, as suitable, for a private company.

4. Provide a description of the proposed treatment technology and processes, including identification of the facility size, daily and annual processing capacity, space required, type and quantity of waste materials to be processed, type and quantity of energy and material products to be produced, odor, noise and other environmental controls, and quantity and type of residuals that will need to be disposed. Please include a schematic diagram to describe the flow of material and individual components

of the process. Describe the marketability of the intended products (energy, fuels, or materials). Identify if your technology is designed to accept biosolids in liquid and/or cake form.

5. Describe if and, if so, how the project will assist in capture and recovery of nitrogen and phosphorous as marketable products.

6. Inculde an estimated schedule for facility development, permitting, design/construction and operation. (PLEASE NOTE THAT THIS IS FOR INFORMATION PURPOSES ONLY, AND NOT CONSIDERED A FIRM COMMITMENT ON THE PART OF THE COMPANY.)

7. Describe if you intend to use any of the existing facilities or equipment. Describe how you will integrate the proposed facilities. Provide a site drawing showing the placement of the new facilities and their integration with existing facilities.

8. Describe how you will minimize downtime and disruption of operation of existing facilities while constructing the new facilities.

9. Identify any constraints foreseen for project development, permitting, design, construction and operation, and marketing of facility capacity or its products.

10. Provide a list of reference facilities that most closely match what is being considered for Naugatuck. For the list of facilities, identify the location, facility size, acreage or square feet required, materials being processed, energy and material products produced, environmental controls, initial date of operation and performance history. Include the capital and O&M costs and revenues received. As available, provide a picture of each reference facility and contact information. Describe how the proposed facility for Naugatuck will differ in appearance, design or operation from the reference facilities.

11. Include a description of benefits to Naugatuck, including in general terms the anticipated environmental, operational, logistical and economic benefits of the technology.

12. Idendify the number of construction jobs anticipated and the number of longterm operating jobs. When considering the number of long term operating jobs, please describe the potential for "sharing" employees, as appropriate, with the Wastewater Treatment Facility operator.

13. Provide a statement describing your ability and willingness to privately finance the facility and a description of your financing plan, e.g., from internal sources or a combination of debt and equity. Describe your experience privately financing similar projects. (ALTHOUGH PRIVATE FINANCING IS NOT ANTICIPATED, THIS INFORMATION IS

REQUESTED AS A BACKUP IN THE EVENT THAT THE BOROUGH DOES NOT FINANCE THE PROJECT.)

14. Include an estimate of project development and design and construction costs, operating and maintenance costs and product revenues. (Estimated costs should recognize the need for prevailing wages during construction, for bonding during construction to the full Biosolids Facility construction cost, for bonding during operations at a level equal to the annual operations and maintenance cost, and for provision of insurance consistent with industry practice during both construction and operations.) Also, provide an estimate of anticipated annual rent payments to the Borough, and describe the basis for a profit sharing plan. All costs, product revenues and rent payments should be shown in \$2016. Include an economic proforma for the project showing assumptions for project development, financing(see instructions below), design and construction costs, operating costs, product revenues, and annual rent payments to the Borough, all assuming a 20 year operating period. For purposes of this proforma, assume public financing using certificates of participation at a 5% annual interest rate amoritized over 20 years, with the first payment of principal to be made at start of operations-August 2022. Include in the cost of financing payment of capitalized interest up to the time of operation (August 2022), one (1) year of debt service as a debt service reserve fund and an industry standard financing fee. Assume an annual escalation rate of 2% in projecting proforma numbers. (NOTE: ALL COST INFORMATION WILL BE CONSIDERED "PLANNING LEVEL" INFORMATION AND NOT CONSTITUTING FORMALLY PROPOSED OR GUARANTEED VALUES.)

15. Describe your willingness and ability to enter in a public private partnership as described in this RFEI. List any significant exceptions you may take.

16. Describe your willingness and ability, individually or as part of a team, to respond to a future RFP that may include operation of the Wastewater Treatment Facility as well as the Biosolids Facility.

Again, the purpose of the RFEI is to assist the Borough gather information to identify qualified and interested companies, technologies and approaches to provide the Services and to provide information to assist the Borough determine if a Biosolids Facility may be viable technically, environmentally and economically. Information in the responses to the RFEI will also be used to assist the Borough develop the RFP. Although a response is highly encouraged to ensure a company's inclusion in the RFP process, the Borough reserves the right to issue RFPs to companies that do not respond to this RFEI.

It is noted that, while individual design or construction firms may respond to this RFEI, the RFP process will evaluate the ability of a firm or team of firms to provide complete, required

Services. Therefore, interested companies are encouraged to consider teaming arrangements as necessary so as to be able to respond to the RFEI as a complete, full service provider.

8.0 EXPENSE OF RFEI RESPONSE

No honorarium, stipend, reimbursement or other such compensation is offered to those submitting or participating under any phase of the submittal or selection process.

The costs and expenses associated with the preparation of a response to this RFEI, any additional requested information thereto, participation in interviews, and preparation of all other information required pursuant to this RFEI, are at the sole cost and expense of the prospective responder. There should be no claims whatsoever against the Borough, its staff, or its consultants for reimbursement of prospective responder costs and expenses incurred as a result of this RFEI.

9.0 QUESTIONS, RFEI SUBMISSION AND CONTACT INFORMATION

Six (6) printed copies, each with a CD of the RFEI Response should be delivered to:

James Stewart Director of Public Works Borough of Naugatuck 246 Rubber Avenue Naugatuck, CT 06770

Tel: 203-720-7071 Fax: 203-720-5680 Email: jstewart@naugatuck-ct.gov

Mr. Stewart should be contacted should you have any questions regarding this RFEI. All questions must be submitted to Mr. Stewart in writing no later than May 16, 2016. A response to questions will be issued to all recipients of the RFEI as soon as possible, via Addenda to the RFEI.

Should you wish to visit the existing facilities after the Pre-Submittal Information Meeting, please contact Mr. Stewart to arrange for such a visit.

Interested parties should not contact the Borough (other than Mr. Stewart) or representatives of the Borough. As noted above, inquiries or requests for additional information should be directed to Mr. Stewart.

Expressions of interest should be submitted to Mr. Stewart at the above address no later than 3:00 PM, local time, on June 1, 2016. Please label package "Expression of Interest, Biosolids Facility, Naugatuck, Connecticut".

ATTACHMENT 1

BIOSOLIDS INFORMATION (Quantity, Characteristics(TS, Volatile Solids, metal content, nutrient content))

(SEE BOROUGH WEB SITE: http://www.naugatuck-ct.gov)

ATTACHMENT 2

SITE DRAWING (Existing WWTP Site and Adjoining Parcel)

(SEE BOROUGH WEB SITE: http://www.naugatuck-ct.gov)