

THE VILLAGE OF RIDGEWOOD
131 North Maple Avenue, Ridgewood, NJ 07450

Request for Proposals
For
A
Sustainable Energy Project
For
Village Facilities

PROPOSAL OPENING

Date: *Wednesday, July 20, 2011*

Time: *4:00 P.M.*

Place: *Village Hall Level Three Conference Room*
131 North Maple Avenue, Ridgewood, New Jersey 07451

June 12, 2011

REQUEST FOR PROPOSALS

Requests for Proposals (RFP's) will be received by the Village of Ridgewood, in the Level 3 Conference Room, at the Village Hall, 131 North Maple Avenue, Ridgewood, New Jersey, on Wednesday, July 20, 2011 at 4:00 p.m. prevailing time, then publicly opened and read aloud for:

**“Request for Proposals
For
Sustainable Energy Project
For
Village Facilities”**

The Village of Ridgewood is seeking proposals from qualified firms to provide Design-Build-Finance services for a turnkey Sustainable Energy Project in the manner described in the Request for Proposals. The work of the project shall include development of a Combined Heat and Power Program at the Village's Water Pollution Control Facility (WPCF), the development and installation of photovoltaic energy recovery systems (solar panels) at various Village facilities, installation of an ultraviolet light effluent disinfection system at the WPCF to replace the current chemical system. All elements of the program presented by respondents shall be self-financed.

The RFP package may be obtained from the Office of the Director of Public Works, Village Hall, 131 North Maple Avenue, Ridgewood, New Jersey 07450, (201) 670-5500, extension No. 238. Proposal packages may be examined or picked up in person between the hours of 9:00 a.m. and 4:30 p.m., at 131 North Maple Avenue, Ridgewood, New Jersey 07450, Monday through Friday. Prospective respondents requesting proposal documents be mailed to them shall be responsible for providing their own postage/delivery service remuneration. No proposal forms shall be given out after 4:00 p.m. on Friday, July 15, 2011

Prices quoted in the proposal must be net and exclusive of all Federal, State and Local Sales and Excise Taxes. Proposals may be submitted in person or by mail prior to the proposal opening, addressed to the Office of the Director of Parks and Recreation. The Village assumes no responsibility for loss or non-delivery of any proposal sent to it prior to the date and time stated for receipt of proposals.

Each proposal must be enclosed in a sealed envelope with the name of the respondent thereon and endorsed, **"Request for Proposals for Sustainable Energy Project for Village Facilities"**.

There will be a non-mandatory pre-submission conference scheduled to be held at the site on Thursday, June 23, 2011 at 10:00 AM, prevailing time. Directions to the site may be obtained from the WPCF office at (201) 670-5575 or from the Village's website: www.ridgewoodnj.net

All respondents shall present satisfactory evidence of being authorized to do business in the State of New Jersey. All respondents shall also provide a copy of their New Jersey Business Registration Certificate with their proposal. All respondents shall adhere to the requirements presented in the "Request for Proposals". The Village of Ridgewood reserves the right to reject any or all proposals, to waive any informality or to accept a proposal, which in its judgment best serves the interest of the Village.

RESPONDENTS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27. Additional information as to these requirements is included in the Request for Proposals.

By Order of the Village Manager

REQUEST FOR PROPOSALS

I. Project Summary

The Village of Ridgewood is seeking proposals from qualified firms to provide Design-Build-Finance services for a turnkey Sustainable Energy Project consisting of the following key components:

Water Pollution Control Facility

1. Combined Heat and Power System retrofit (engine/generator)
2. Photovoltaic (Solar) energy recovery system
3. Ultraviolet light effluent disinfection system
4. Any other energy saving or producing opportunity that presents itself

Roof Solar Panel Arrays on Village Owned Buildings

Four roof locations described herein

1. Village Hall, 131 North Maple Avenue
2. Main Firehouse, 203 East Glen Avenue
3. Village Library, 125 North Maple Avenue
4. EMS Headquarters, 33 Douglas Place

Financing Capital to Implement the Respondent's Proposal

The Sustainable Energy Project will include design engineering, construction management, construction of components, and ongoing operations assistance during the life of the contract term to maximize the ultimate energy production from the project. Also included shall be maintenance services for the engine-generators and solar arrays during the project term.

The selected firm will pay all costs to perform the Project and finance the cost over a long-term contract, projected to be up to 20 years based on proposer's offer and agreement by the Village. At the end of the agreed term, the Village shall take ownership of the Project. The Village sees benefit in the Sustainable Energy Project in its ability to purchase electricity for its needs at a cost less than current suppliers charge from sustainable sources and reducing its use of natural gas over the term of the contract. A power purchase agreement will be established to use all available heat and power at the Water Pollution Control Facility (WPCF) and all of the available electricity generated from the solar panel arrays at the various building locations.

The specific goals for the Project are to:

- 1) Maximize production of electricity and heat at the WPCF so as to minimize the requirement to purchase from the utilities, thereby recovering energy from the waste and improving the WPCF's carbon footprint.
- 2) Discontinue use of chemicals to disinfect the WPCF's discharge through use of UV light (which adds no chemicals to the effluent water).
- 3) Maximum solar energy recovery at the four listed Village building locations.

II. Introduction

The Village of Ridgewood Water Pollution Control Facility (WPCF) is located at 561 Prospect Street, Glen Rock, New Jersey, in a quiet, wooded, residential area abutting a Bergen County Park.

The WPCF was recently updated. The existing facility discharges treated and disinfected domestic wastewater into the HoHoKus Brook, which is classified as a FW2-NT waters. The plant has a NJPDES flow value of 5.0 million gallons per day (MGD) and currently discharges a monthly average daily flow of approximately 2.5 MGD. The facility serves the Village (with approximately 26,000 residents), plus several hundred homes in surrounding municipalities (primarily due to topographic reasons). The plant is operated as a nitrifying activated sludge plant with primary clarifiers, secondary aeration, secondary clarifiers, and anaerobic sludge digestion via two digesters. The two sludge digesters produce biogas, which is used to heat the digester sludge, with excess biogas currently being flared off. Digested sludge is hauled off site for final disposal via incineration. The overall goal for this request for proposals is to improve sustainability, reduce the WPCF's carbon footprint, improve environmental quality, and most importantly reduce the WPCF's operating cost.

The WPCF has recently implemented the use of a bio-organic catalyst to optimize the plant's treatment function. A side benefit of this catalyst has been an increase in the production of biogas.

The purpose of this Request for Proposal (RFP) is to solicit proposals from qualified design build firms, joint ventures, or partnerships to develop an economically viable and self-supporting beneficial reuse of the biogas generated by the WPCF with the recovery of solar energy at the WPCF and four additional Village buildings (sites previously listed). An important consideration of the Village's selection of the successful proposer to this RFP will be minimum capital funding by the Village. In turn, the selected firm shall determine its potential gains from grants, renewable energy credits (both solar and otherwise), and carbon credits, and indicate how these will be shared with the Village, if earned.

A. VILLAGE INFORMATION

The Village of Ridgewood is responsible for issuing this RFP.

Respondents requiring technical information regarding this project shall direct all written questions to:

Mr. Christopher J. Rutishauser, P.E.,
Director of Public Works
Village of Ridgewood
131 North Maple Avenue
Ridgewood, New Jersey 07450
(201) 670-5500, extension 238
crutishauser@ridgewoodnj.net

Respondents seeking operational information on the WPCF shall direct all questions to:

Mr. Robert Gillow, Superintendent
Water Pollution Control Facility
561 Prospect Street
Glen Rock, New Jersey
(201) 670-5575
rgillow@ridgewoodnj.net

B. PRE-SUBMISSION CONFERENCE

A pre-submission conference will be held at the WPCF, 561 Prospect Street, Glen Rock, New Jersey, on Thursday, June 23, 2011 at 10:00 a.m. (Eastern Standard Time). All questions regarding this RFP and the scope of the requested for work will be discussed at this conference. Attendees needing directions to the site are advised to call the WPCF office at (201) 670-5575, during the hours of 7: 00 am and 3:00 pm, Monday through Friday.

C. BACKGROUND

The WPCF is one of the Village of Ridgewood's largest consumers of electric power. Electricity is used to operate the wastewater treatment process. The plant has definitive peaks in inflow volume. These inflow peaks often coincide with utility company peak power demands. One of the Village's goals of a Sustainable Energy Project is for a Combined Heat and Power/Photovoltaic (CHP/PV) program to help attenuate the WPCF's peak power demands when they coincide with our supplying utility's peak power demands.

The WPCF is striving to be an environmental leader in the community by reducing its greenhouse gas emissions from the plant. This project will be part of the Village's Sustainable Energy Project program.

The Village of Ridgewood operates the WPCF as a division of the Department of Public Works. The WPCF is not a Municipal Utility Authority or a regulated utility.

All visitors to the facility are reminded to exercise all necessary precautions for visiting an operating wastewater treatment plant. All plant safety regulations must be adhered to. Visitors are not to interfere with plant operations. All visits shall be coordinated with the Superintendent of the WPCF during the normal working hours of 7:00 am to 3:00 pm, Monday through Friday.

D. PROPOSED OUTLINE

Preface:

The selected firm is advised that the WPCF currently uses biogas collected from the sludge digesters to heat and maintain the optimum temperatures for the sludge in the digesters via a boiler. Any excess biogas, beyond what is needed to heat the sludge, is currently flared to the atmosphere. It is the intent of the CHP program to create and provide a reuse of this excess biogas while maintaining the optimum sludge digester temperatures. The CHP program shall also incorporate any viable reuse of excess heat from the sludge heating process.

The proposed Photovoltaic (PV) system and ultraviolet light (UV) effluent disinfection systems must meet all regulatory agency's requirements for approval. For the UV effluent disinfection system, it shall be designed for the WPCF's peak flow of 10.0 MGD.

Any proposal submitted must take into consideration the regulatory oversight that governs the WPCF's operation. At a very minimum, the following agencies will have a say in the operation of the WPCF:

- New Jersey Department of Environmental Protection
- New Jersey State Department of Health Codes
- United States Environmental Protection Agency
- Borough of Glen Rock Land Use and Building Departments
- Village of Ridgewood

All requests for meetings with the Village of Ridgewood relating to this project are to be coordinated through the offices of the Village Engineer to minimize scheduling conflicts with the selected firm. The selected firm will be required to present their proposal at one or more public meetings of the Village Council of the Village of Ridgewood.

Phase I: Preliminary Design Work

The suggested preliminary work is as follows:

CHP

- Identify and quantify the amount of biogas (methane) available from the WPCF's existing sludge digesters based upon present plant inflow volumes and plant infrastructure.
- Identify and quantify the potential maximum biogas production possible from the WPCF with the current plant infrastructure (i.e. digester covers and piping), utilizing treatment additives to plant's process. The plant is currently using a bio-organic catalyst to assist with the treatment process with excellent results.
- Examination of the quality of the biogas produced from the digesters with recommendations on any treatment that may be necessary prior to a beneficial reuse.

- Identify appropriate Combined Heat and Power (CHP) technology for the parameters of the plant. Selected technology must be commercially available with demonstrated success at a minimum of 5 separate installations in tri-state area (New Jersey, New York, and Pennsylvania) or along the eastern seaboard of the United States. Technologies proposed can be reciprocating engines or micro-turbines for co-generation capability.
- Examine and develop waste heat reuse from the sludge digester boilers and any engine recommended by this proposal for the generation of electricity.
- Estimates on the values of the electricity and heat the recommended technology can create.
- Identify any safety concerns with a CHP program and make appropriate recommendations to the Village on they could be mitigated.

PV

- Determine land area, surfaces, and structures where solar panels can be installed.
- Determine transmission equipment to utilize the power at the plant or at the respective building's roofs the solar panels are installed
- Determine the quantity of power to be supplied (by the solar panels) and the variability

UV

- Identify the location and layout for installation of banks of UV bulbs and the appropriate cleaning regimen for the disinfection of the plant's effluent prior to its discharge to the brook. The UV disinfection system shall be such that the WPCF will no longer be required to use chemical disinfection agents on its effluent.

With the above information the proposer shall prepare a recommended design that embodies its best interpretation of what is most suited for the plant and respective buildings.

The proposer shall offer a Power Purchase Agreement with a pricing plan to provide a turnkey Project, outlining schedule and terms. The selected proposer (firm) shall then present the Project to a Village Council workshop session as soon as arrangements can be made with the Village Manager.

Any presentation shall include, as a minimum:

1. Regulatory requirements and permitting
2. Construction plan and schedule
3. Operating plan and explanation of cost savings for the Village
4. Payment plan to proposer with project terms and guarantees
5. Proposed term of the Contract

Phase II: Design Finalization

Once the Project is approved by the Village Council a complete contract document will be prepared as soon as practical. Any required modifications to the submitted proposals will be incorporated in a final negotiated contract defining the Project including schedule, equipment, price, payment plan, and terms.

Phase III: Contract execution

Contractor shall perform the Sustainable Energy Project according to the signed contract and schedule. The Village shall assist with expediting the Project where possible including assisting with obtaining the required permits.

E. PROPOSAL SUBMISSIONS

Respondents who wish to be considered for selection as the contractor for this project must submit a complete response to this RFP. All proposals shall become the property of the Village of Ridgewood.

The presented proposal shall include the cost of any and all subcontractors the respondent feels are necessary to the successful completion of Project, including all professional services required. All work shall be prepared in a manner acceptable to reviewing regulatory agencies and accepted industry standards, by the appropriate required licensed professionals.

All proposals shall be specifically written for this project and shall include:

- 1.) The firm's clear, concise understanding and approach to the Project and ability to adhere to the required schedule.
- 2.) Qualifications of the firm to perform this Project based upon similar past work experience. Past work shall be documented in the respondent's RFP.
- 3.) Key personnel that will be assigned to this project and their professional qualifications.
- 4.) Completed and signed Price Proposal Form as provided with this RFP.
- 5.) Satisfactory evidence of Professional Liability Insurance and other insurances as may be required by the Village.
- 6.) Copy of the respondent's New Jersey Business Registration Certificate.

ONE (1) ORIGINAL AND ELEVEN (11) COPIES OF EACH RESPONDENT'S PROPOSAL SHALL BE SUBMITTED TO THE DIRECTOR OF PUBLIC WORKS, LEVEL 3 CONFERENCE ROOM, VILLAGE HALL, ON OR BEFORE WEDNESDAY, JULY 20, 2011 AT 4:00 PM.

F. RIGHT TO REJECT

The Village reserves the right to reject any or all proposals and to award this project in whole or part; to waive any informalities, if in its sole discretion is in the best interest of the Village.

G. ADDENDA

The Village reserves the right to amend, add, or delete any of the requirements of the RFP. If it becomes necessary, a written addendum will be issued to all firms who were registered at the pre-submission conference or registered upon pick up of the RFP package. Firms shall acknowledge receipt of such addenda, if issued, in their proposals.

H. COSTS

The Village recognizes that labor, efforts, and out of pocket expenses will be expended by firms to provide a response to this RFP. The Village shall assume no responsibility or liability in this regard for any costs incurred by a respondent who submits a proposal or a firm who performs some work to submit a proposal and then abandons its effort and does not submit a proposal or is not the selected successful firm.

I. PROPOSAL EVALUATION

The Village will evaluate all proposals submitted within the guidelines established herein. Evaluation criteria will include:

- The respondent's proposal presented to the Village, which accurately demonstrates an understanding of the project and outlines practical approaches to perform the Sustainable Energy Project based on proven technologies that will be beneficial to the Village.
- The Project team proposed by the respondent. Team leaders, staffing and consultants. Specific responsibilities of the various team members. Delineation of management tasks of the intended project. Capability of the respondent to integrate this project into the Firm's present workload to allow performance of the work within the agreed to schedule.
- Project implementation plan with anticipated cost savings for the Village. The financial viability of any proposal will be a key to its consideration. Proposals shall

demonstrate a detailed understanding of the available grants for funding the proposed project as well as covering the costs of the proposal.

- Past experience of the project team and its individual members as it relates to the intended project.
- Minimal or zero capital cost to the Village for a successful Project.
- Experience and familiarity with the rules and procedures of the regulatory agencies having jurisdiction on this Project.
- Schedule for implementation of the Project.
- Affidavits of Professional Liability Insurance.
- Selected proposer to this RFP will make a presentation to one or more public meetings of the Village Council of the Village of Ridgewood.
- All costs for the proposal page shall be presented as present values.
- New Jersey Business Registration Certificate for respondent to the RFP.

J. AFFIRMATIVE ACTION REQUIREMENTS

Respondents to this RFP are required to comply with the requirements of the attached Exhibit A. All respondents to this RFP shall submit a copy of their State of New Jersey Certificate of Employee Information Report.

Additional information can be obtained from the State of New Jersey Department of the Treasury, telephone (609) 292-5473, Fax (609) 292-1102

(REVISED 4/10)

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)
N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. 17:27-5.2.

EXHIBIT A (Cont)

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval

Certificate of Employee Information Report

Employee Information Report Form AA302 (electronically provided by the Division and distributed to the public agency through the Division's website at www.state.nj.us/treasury/contract_compliance)

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.**

VILLAGE OF RIDGEWOOD
Price Proposal Form

I. Term of contract = _____ years. Indicate source of capital to finance improvements described in this proposal. Indicate if any capital financing is required by the Village of Ridgewood.

II. Power Purchase Agreement: Attach standard form agreement. Provide present value of heat and power cost savings from biogas and solar given proposed pricing structure in the PPA compared to current average price of \$0.14/kwh. See attached map and list of areas at the wastewater plant (ground arrays) and Village buildings (roof arrays) available for installation of solar panels. (Use 9% discount rate).

Present Value (\$) = _____

Show calculation and all key assumptions.

III. Ultraviolet light sanitary sewage effluent disinfection system

Annual fee = \$ _____ (paid 1/12 monthly) for disinfection system
Indicate annual price adjustments, if any. Proposals shall include cost of replacement bulbs over the 20-year term, which shall be provided by the proposer.

Provide present value of UV system cost savings compared to the current use of chemicals at approximately \$60,000 per year. Assume labor costs are the same for both. (Use 9% discount rate).

Present Value (\$) = _____

Show calculation and all key assumptions.

IV. Indicate plan for maximizing revenue derived from hauled in wastewater and septage. Describe revenue sharing plan and calculate the present value of Ridgewood's share of hauled in wastewater materials. (Use 9% discount rate).

Present Value (\$) = _____

Show calculation and all key assumptions.

V. Contract Terms

A certificate of insurance will be required naming the Village as additionally insured in an amount and format satisfactory to the Village. The work shall also require a performance and payment bond meeting the Village of Ridgewood's requirements. A blank performance bond is attached as part of this RFP.

Signed: _____

Date _____

Title: _____

Company Name, Address, Telephone, and email contact

VILLAGE OF RIDGEWOOD

Bond No. _____

PERFORMANCE AND PAYMENT BOND
(N.J.S.A. 2A:44-147)

(Schedule F)

Know all men by these presents, that we, the undersigned _____ of _____ as principal and _____ as sureties, are hereby held and firmly bound unto the Village of Ridgewood, at 131 North Maple Avenue, Ridgewood, New Jersey, in the penal sum of _____ dollars (\$ _____), for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that whereas, the above named principal did on the _____ day of _____ 201 __, enter into a contract with the Village of Ridgewood, which said contract is made a part of this the bond the same as though set forth herein.

Now, if the said Principal shall well and faithfully do and perform the things agreed by the Principal to be done and performed according to the terms of said contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S. 2A:44-143 for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward, performing or completing of said contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S. 2A:44-143 having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in anywise affect the obligation of said surety on its bond.

IN WITNESS WHEREOF, the said principal and surety have signed and sealed this instrument this ___ day of _____ 201 ____.

VILLAGE OF RIDGEWOOD

Bond No. _____

PERFORMANCE AND PAYMENT BOND
(N.J.S.A. 2A:44-147)

(Schedule F)

(Corporate Name) (Corp. Seal)

Attest: _____
Corporation Secretary

By _____
(Principal Signature)

(Title)

Witness as to Surety:

(Surety Company)

(Mailing Address)

(Email Contact Address)


(Signature)

By _____
(Attorney-in-Fact) (Seal)

By _____
(State Representative)

INTEROFFICE CORRESPONDENCE
VILLAGE OF RIDGEWOOD
Department of Public Works

TO: Kenneth A. Gabbert, PhD., Village Manager
Heather A. Mailander, MMC, RMC, CMC, Village Clerk
Steve Sanzari, CFO
Robert Gillow, Superintendent, WPCF

FROM: Christopher J. Rutishauser, P.E., Director 

RE: **Requests for Proposals (RFP)**
Sustainable Energy Project
Village of Ridgewood
File No. 11523

SUB: **Review of Received Proposals – Recommendation for Award**

DATE: July 29, 2011, *Updated September 1, 2011*

The Village received proposals for the referenced RFP on Wednesday, July 27, 2011 at 4:00 pm. The original date for submission had been July 20, 2011, but several prospective respondents had requested additional time, so a one week time extension was granted and advertised to all.

We had thirteen (13) registered holders of the RFP. We received three emails declining to submit a response as that they felt it unsuitable for them. We received one response that felt the Water Pollution Control Facility (WPCF) was too small for the Combined Heat and Power (CHP) component and pushed for more solar energy panels. We received one request for additional time, which was denied as that the RFP had been advertised on June 18, 2011. Several other plan holders were known to be subcontractors or consultants that ended up partnering in the proposal received. Partnering was encouraged.

The overall intent of the RFP was to seek a full-service firm capable of developing, financing, constructing, operating, and maintaining for the duration of the term a multi-phase sustainable energy program for the Village primarily utilizing our WPCF and four other Village sites. The Village's benefit would be from the ability to purchase electricity below our current market rate, hence saving the taxpayer money. The goal of the project is to get sustainable energy benefits without using Village capital funds.

A secondary goal of the RFP is to have the WPCF switch from chemical disinfection of treated wastewater to ultraviolet light disinfection (UV). This has benefits to both the Village and the environment. The Village benefits from not having to purchase disinfection chemicals (costs that have been rising, the bids received on August 30, 2011

quote a cost of chemicals for 2012 of \$58,840.00) while getting a supported UV system and an additional venue to use electricity generated by the CHP/Solar program. The environment benefits from the elimination of chemicals and/or their residue entering the effluent's receiving body of water, the Ho-ho-kus Brook, just upstream of the Glen Rock Duck Pond area. Additionally, chemical handling has been problematic for plant staff with several exposures over the past several years resulting in injuries (workman compensation claims costs).

The following proposals were received. I've done a brief review noting highlights.

Energy Systems Group

Their proposal presented their qualifications and recommendations, but no actual course of action to address the requested for items in the RFP. The proposal appeared to be more geared to energy conservation efforts and hiring Energy Systems Group as a consultant to the Village.

Eneractive Solutions

The proposal presents a total of 425 kWdc of solar generation, a 75 kW CHP generation unit, UV disinfection system for up to 10 MGD. Lease term would be for 20 years. Uses Gannett Fleming as an engineer.

UTS BioEnergy LLC

The proposal included an example Power Purchase Agreement. Proposal offers energy at \$0.12 kWh. UTS propose extensive arrays of solar panels, including a "carport" type for the Village Hall/Library parking lot. They recommend taking in FOG (fats, oils, grease waste streams). The proposal reserves the right of UTS BioEnergy LLC to request nearby land space from the Village at no cost to the project. This could be an issue as that the Village is constrained on open space and also may not want a solar carport over the parking lot. They included UV disinfection for plant effluent.

United Green Solutions, LLC/Solarian Capital

Declined to bid, but recommended a large amount of land for solar panels at the WPCF. Also felt that the WPCF was too small for an effective CHP program. Did not feel a PPA could be profitable for the provider.

Natural Systems Utilities/Middlesex Water Company

This proposal was geared to greater optimization of the CHP program at the WPCF with less solar panels. They propose Spectraserv as the construction contractor. Spectraserv had constructed the recent plant upgrade. Bob Gillow, Superintendent, WPCF, and I have had a good relationship working with Spectraserv and would recommend them as a contractor. Propose a CHP generator of 180 kW. The proposal presents a total of 268.8 kW of solar at the WPCF, with an additional 181.92 kW solar generated power from panels at the other locations presented in the RFP. The proposal presents aerial views of where panels would be installed. The proposal suggests that the WPCF can be powered entirely via renewable energy utilizing the hauled in waste from the Village's Liquid Waste Program. The proposal presents a detailed plan for energy recovery from the

sludge digestion process. The proposal included UV disinfection for the plant effluent. Their proposal also includes using the Liquid Waste Program as a means to boost biogas production through the receipt of FOG (also an additional revenue stream). They included UV disinfection for plant effluent.

As that this project has the potential of significant environmental benefits, I've discussed it with the Ridgewood Environmental Advisory Committee (REAC). Ed Schwartz, Chairman of REAC, provided the attached email with his review comments. REAC's input is invaluable from the environmental perspective and the technical expertise of their members in such projects.

Recent Developments

Since the initial review of the proposals received, the prices paid on the open market for SREC's (Solar Renewable Energy Credits) has fluctuated. The fluctuation has generally been toward lower prices paid. Attached, please find some printouts from the New Jersey Clean Energy website that prices SREC's.

For the proposals the Village received, the SREC's from the generated electricity will belong to the vendor as part of the compensation for the capital invested in the Village. The risk of SREC fluctuation should be solely on the vendor, not the Village. The proposal from UTS requires the Village to guarantee a minimum \$600 per SREC with a minimum of 2,100 SREC per year. This is a risk sharing that Natural Systems Utilities/Middlesex Water Company did not include in their proposal.

The recent hurricane provided many of us a reminder of how fragile the electricity supply system can be. A Sustainable Energy Project at the WPCF would go a long way to reducing the plant's reliance and need for outside supplied power. In an electricity emergency, being able to generate our own power for our operations coupled with the existing emergency generator will eliminate power supply concerns.

Summary

At this time, the most complete and detailed proposal is from Natural Systems Utilities/Middlesex Water Company. I recommend the Village award the work of developing a Sustainable Energy Project for the Village to Natural Systems Utilities/Middlesex Water Company. A resolution for the Village Council's consideration to award is attached.

The time for the Village to act is somewhat critical as that several key grants and Government programs that support this type of project expire December 2011. These grants and programs are key components of several of the respondent's proposals.

If the Village Council decides to award the work of developing the Sustainable Energy Project, I also recommend that the Village Council authorize the Village Manager and Mayor to execute a contract with Natural Systems Utilities/Middlesex Water Company. The contract would be a form of a Power Purchase Agreement. A resolution giving that authorization is also attached.

Once an authorization to execute a contract (Power Purchase Agreement) is approved, the Village and Natural Systems Utilities/Middlesex Water Company will sit down and draft a document. That draft document would need attorney review before it is signed by the Mayor and the Village Manager. The contract would define the cost structure for the purchase of the electricity generated, responsibilities of each party, any costs to the Village, access rights, FOG program, etc.

The full value of the savings to the Village from the Sustainable Energy Project is difficult to determine at this time. Much will be dependent on how much electricity the various components can produce. It is to the vendor's advantage to produce as much power as possible to sell back to the Village. An initial projection suggests a revenue stream of up to \$1,740,000 net present value to the Village over the 20 year period of the contract. After the term of the contract has expired, the Village can take ownership of all of the components installed under the project. Or the Village can consider having Natural Systems Utilities/Middlesex Water Company extend their contract. The vendor has to maintain and operate the system.

Each respondent to the RFP submitted enough copies of their proposal for each member of the Village Council to be able to review them, as well as the Village Attorney. Please let me know if you'd like the extra copies.

Please advise if at the next Village Council workshop meeting you would like a presentation to the Council from Natural Systems Utilities/Middlesex Water Company.

If you have any questions or require additional information, please do not hesitate to contact me.

Enc.

Chris Rutishauser

From: Eco Ed Schwartz [ed.schwartz@greenlivingsolutionsnj.com]
Sent: Thursday, August 04, 2011 2:05 AM
To: Chris Rutishauser
Cc: sched05@yahoo.com
Subject: Evaluation of Sustainability Energy Project for Village Facilities RFP for the Village of Ridgewood

Chris,

On behalf of the Village, REAC has reviewed the responses for the RFP's within the time constraints provided. The proposals have been analyzed and we have some feedback, as documented below. We can stay in the loop during the process to provide additional input as the project is further developed.

PROJECT VALIDITY:

There were 2 companies, whose responses clearly validated the project. They are both willing to accept taking on the entire capital expense and risk of the project, with the promise of getting a solid and reliable return-on-investment, while also generating a fair amount of revenue for the Village. In today's economic environment, it is clear that taking on a capital-intensive project such as this would only be acceptable if the net revenue flow were highly reliable with minimal risk.

ENVIRONMENTAL IMPACT:

By any account, this project shows a solid commitment to environmental stewardship by the Village. The estimates of size of equipment and capacity of energy creation vary, but the Solar Project will generate from 655,000kWh – 1,100,000 kWh/year of renewable energy, reducing the need for that electricity to come from our utility grid, which is predominantly powered by Nuclear and Coal-Fired Power Plants.

The Combined Heat and Power engine driven generator will capture waste heat and waste methane to produce electricity that drives a 180kW – 480 volt generator, while providing additional btu capacity. This will replace a natural gas powered boiler, while producing additional electrical capacity. The current environment produces and loses this "waste" heat, which will be used to offset some of the heat required for the digester sludge maintenance. Also, currently, the methane created is partially wasted, and "flared off", which means it is merely burned off. That fire continuously adds pollution and carbon emissions into the atmosphere, adding to Global Climate Change.

The UltraViolet Disinfection System will use UV lighting to treat the effluent, which eliminates the use of harsh Chlorine-based chemicals which are currently used. Chlorine Gas is a carcinogenic respiratory irritant which is hazardous to create, ship, store and use. Its creation is listed by Homeland Security as a National Security Risk, as the gas is classified as dangerous enough to be used in a terroristic attack. It is also listed by many environmental groups as a primarily hazardous material whose use should be minimized or completely eliminated. Removal of these chemicals from our treatment process not reduce the environmental impact of its production, shipping, storage, etc., but it also reduces the risk borne by the Village of any accidents or leaks during this process, or potential exposure to Village employees who work with these chemicals during the treatment process. The chemicals currently cost the Village ~\$60,000/year, and the cost fluctuates and is expected to rise in the future.

As mentioned, the exact kWh's and btu's created/captured by the systems proposed varies by estimates and is to be determined more accurately during the design phase.

FINANCIAL IMPACT:

The project scope has an initial period of 20 years, after which the systems will be turned over to the Village. At this point, they will continue to provide these benefits, but may be near obsolescence or approaching end of expected useful lives. For analysis purposes, we are only measuring the initial 20 year period. The applicants will maintain and operate the systems during this initial period. Once again, results vary, but initial analyses provided show a revenue stream to the Village at a minimum Net Present Value of \$1,740,000.

All finalists will be kept to the requirement of no cash outlay for the Village. This cannot be measured by traditional Return-On-Investment metrics, as there will be no investment. In other words, the Village will be provided with what amounts to a "gift" or a "grant" of advanced, more efficient solutions, while increasing revenue (reducing costs).

TRIPLE BOTTOM LINE BENEFIT:

This project appears to clearly meet the requirements of a triple bottom line benefit. Financially, both the Village and the contractor will prosper, Environmentally, the Village and the planet will be better off, and Economically, jobs will be created while Village employees will be exposed to less risk.

Therefore this project appears to be highly attractive to the Village. In addition, this is a cutting edge technological and environmental project for the Village that takes a leadership position amongst other municipalities. The visibility, particularly of the solar arrays on the Village Hall and Library will promote the Village's efforts and commitment within our community.

EVALUATION OF SPECIFIC SUBMISSIONS:

There was one response, which was dismissed by us, as it was really a non-response, and explanation why the Village needed to pay for the companies further consulting services. Eneractive Solutions was more well thought through, but did not adhere to the requirements of no initial investment by the Village. It also relied heavily upon consulting services to see the project through to completion.

The final two, Natural Systems Utilities (NSU) and UTS BioEnergy (UTS) both adhered to the standard of no financial investment by the Village.

As a comparison of the two, UTS was much more aggressive on the sizing of their systems and revenue projections for the Village. While higher revenue is attractive, we fear that these projections may be unrealistic, and set expectations at an unattainable level. In our final design stage, Village officials can dictate the land/roof space/parking canopies available for solar, and capacity for additional FOG shipments

Pros for NSU:

Uses contractors with a positive history with the Village, with regards to quality of product and follow up service. Clearly demonstrates a good understanding of the scope of the project, timeline expectations. Sets reasonable sizing and revenue expectations.

Pros for UTS:

Uses contractors with solid experience. Demonstrates creativity in developing a solution which meets the requirements set forth by the Village's RFP.

ADDITIONAL NOTES:

Would like to see more detailed information from the two finalists in the following areas –

Estimated Capital Outlay

Structure of expenses, including all State and Federal credits, incentives, etc.

Projected savings and projected revenue for the Village.

For either applicant, if future grants or rebates and incentives become available, would recommend that benefits accrue to the Village, and not the contractor. Would like to see ownership transferred to the Village at end of 20 year term, as the project should have been completely paid for during this time period.

Best Regards,

Ed Schwartz

RESOLUTION NO.

WHEREAS, the Village of Ridgewood Water Pollution Control Facility (WPCF), 561 Prospect Street, Glen Rock, New Jersey, is the largest consumer of electricity among all Village facilities for its wastewater treatment operations; and

WHEREAS, the WPCF generates methane (also known as biogas) during its anaerobic sludge digestion process, some of which is reused to heat the sludge, but most of which flared to the environment providing no benefit to the Village; and

WHEREAS, the Village of Ridgewood has a number of buildings (the main Firehouse, Village Hall, 33 Douglas Place, WPCF, and the Library) that are suitable for the installation of solar panels for the purpose of generating electricity; and

WHEREAS, Natural Systems Utilities, LLC and Middlesex Water Company, has presented a comprehensive proposal for a Sustainable Energy Project at the WPCF and various Village facilities, at no capital cost to the Village, with the goal of generating electricity and selling it back to the Village at a cost less than what the Village pays its current providers; and

NOW THEREFORE BE IT RESOLVED, by the Village Council of the Village of Ridgewood that it authorizes the Mayor and the Village Manager to execute a long term contract with Natural Systems Utilities, LLC and Middlesex Water Company to develop a Sustainable Energy Project at the Village's WPCF and other Village facilities with the purpose of providing the Village with electricity from sustainable sources below market rates saving the Village funds while providing for positive environmental benefits based upon the proposal received.

I hereby certify that this resolution, consisting of 1 page, was adopted at a meeting of the Village Council of the Village of Ridgewood, held this ___ day of _____, 2011.

Moved Second Ayes Nays Absent Abstain

Aronsohn						
Riche						
Walsh						
Wellinghorst						
Killion						

Keith D. Killion,
Mayor

Heather A. Mailander
Village Clerk

RESOLUTION NO.

Res. No.

BE IT RESOLVED, by the Village Council of the Village of Ridgewood that five (5) proposals were received for the "Sustainable Energy Project Village of Ridgewood" on Wednesday, July 27, 2011 at 4:00 pm, and

BE IT RESOLVED, that the proposal for "Sustainable Energy Project Village of Ridgewood" be and is hereby accepted from:

Natural Systems Utilities, LLC and Middlesex Water Company, a joint venture
2 Clerico Lane, Suite 210
Hillsborough, New Jersey 08844
(908) 359-5129

BE IT FURTHER RESOLVED that the "Sustainable Energy Project Village of Ridgewood" will not require any Village capital funds to implement.

I hereby certify that this resolution, consisting of ___ page(s), was adopted at a meeting of the Village Council of the Village of Ridgewood, held this ____ day of _____, 2011.

Moved Second Ayes Nays Absent Abstain

Aronsohn						
Riche						
Walsh						
Wellinghorst						
Killion						

Keith D Killion,
Mayor

Heather A. Mailander
Village Clerk

INTEROFFICE CORRESPONDENCE
VILLAGE OF RIDGEWOOD
Department of Public Works

TO: Kenneth A. Gabbert, PhD., Village Manager

FROM: Christopher J. Rutishauser, P.E., Director



**RE: Requests for Proposals (RFP)
For A
Sustainable Energy Project
Village of Ridgewood
File No. 11523**

SUB: Review of Received Proposals

DATE: July 29, 2011

The Village received proposals for the referenced RFP on Wednesday, July 27, 2011 at 4:00 pm. The original date for submission had been July 20, 2011, but several prospective respondents had requested additional time, so a one week time extension was granted and advertised to all.

We had thirteen (13) registered holders of the RFP. We received three emails declining to submit a response as that they felt it unsuitable for them. We received one response that felt the Water Pollution Control Facility (WPCF) was too small for the Combined Heat and Power (CHP) component and pushed for more solar energy panels. We received one request for additional time, which was denied as that the RFP had been advertised on June 18, 2011. Several other plan holders were known to be subcontractors or consultants that ended up partnering in the proposal received. Partnering was encouraged.

The overall intent of the RFP was to seek a full-service firm capable of developing, financing, constructing, operating, and maintaining for the duration of the term a multi-phase sustainable energy program for the Village primarily utilizing our WPCF and four other Village sites. The Village's benefit would be from the ability to purchase electricity below our current market rate, hence saving the taxpayer money. My goal with the project is to get sustainable energy benefits without using Village capital funds.

A secondary goal of the RFP is to have the WPCF switch from chemical disinfection of treated wastewater to ultraviolet light disinfection (UV). This has benefits both the Village and the environment. The Village benefits from not having to purchase disinfection chemicals (costs that have been rising) while getting a supported UV system and an additional venue to use electricity generated by the CHP/Solar program. The environment benefits from the elimination of chemicals and/or their residue entering the

effluent's receiving body of water, the Ho-ho-kus Brook which is right in the Glen Rock Duck Pond area. Chemical handling has been problematic for plant staff with several exposures over the past several years resulting in injuries (claim costs).

As that this project has the potential of significant environmental benefits, I've discussed it with the Ridgewood Environmental Advisory Committee (REAC). Their input will be invaluable from the environmental perspective and the technical expertise of their members in such projects.

The following proposals were received. I've done a brief review noting highlights.

Energy Systems Group

Their proposal presented their qualifications and recommendations, but no actual course of action to address the requested for items in the RFP. The proposal appeared to be more geared to energy conservation efforts and hiring Energy Systems Group as a consultant to the Village.

Eneractive Solutions

The proposal presents a total of 425 kWdc of solar generation, a 75 kW CHP generation unit, UV disinfection system for up to 10 MGD. Lease term would be for 20 years. Uses Gannett Fleming as an engineer.

UTS BioEnergy LLC

The proposal included an example Power Purchase Agreement. Proposal offers energy at \$0.12 kWh. Propose extensive arrays of solar panels, including a "carport" type for the Village Hall/Library parking lot. Recommend taking in FOG (fats, oils, grease waste streams). The proposal reserves the right of UTS BioEnergy LLC to request nearby land space from the Village at no cost to the project. This could be an issue as that the Village is constrained on open space and may not want a solar carport over the parking lot. Included UV disinfection for plant effluent.

United Green Solutions, LLC/Solarian Capital

Declined to bid, but recommended a large amount of land for solar panels at the WPCF. Also felt that the WPCF was too small for an effective CHP program. Did not feel a PPA could be profitable for the provider.

Natural Systems Utilities/Middlesex Water Company

This proposal was geared to greater optimization of the CHP program at the WPCF with less solar panels. They propose Spectraserv as the construction contractor. Spectraserv had constructed the recent plant upgrade. Bob Gillow and I have had a good relationship working with Spectraserv and would recommend them as a contractor. Propose a CHP generator of 180 kW. The proposal presents a total of 268.8 kW of solar at the WPCF, with an additional 181.92 kW solar generated power from panels at the other locations presented in the RFP. The proposal presents aerial views of where panels would be installed. The proposal suggests that the WPCF can be powered entirely via renewable energy utilizing the hauled in waste from the Village's Liquid Waste Program. The

proposal presents a detailed plan for energy recovery from the sludge digestion process. Included UV disinfection for plant effluent.

Summary

At this time, the most complete and detailed proposal appears to be from Natural Systems Utilities/Middlesex Water Company. I will continue to review the fine print each proposal and will present my additional observations in a follow up memorandum.

Each respondent submitted enough copies of their proposal for each member of the Village Council be afforded the opportunity review them, as well as the Village Attorney. At an upcoming Village Council meeting, the Council may wish to have several of the respondents present what they can do for the Village.

The time for the Village to act is somewhat critical as that several key grants and Government programs that support this type of project expire December 2011. These grants and programs are key components of several of the respondent's proposals.

If you have any questions or require additional information, please do not hesitate to contact me.

Enc.