

COUNTY OF ROCKLAND  
Department of General Services  
Purchasing Division

# Contract Award Notification

Title: **Combined Heat and Power (CHP) and Gas Conditioning Systems (GCS) Maintenance Services**

Contract Period: **March 1, 2024, through February 28, 2029, w/ (1) 5-year option**

Original Date of Issue: 03/01/2024

Date of Revision:

**BID No:** RFB-RC-2023-072

Authorized Users: RCSD#1

Address Inquiries To:

Name: Michele Phillips  
Title: Purchaser I  
Phone: 845-364-2984  
Fax: 845-364-3809  
E-mail: [phillipm@co.rockland.ny.us](mailto:phillipm@co.rockland.ny.us)

### Description

To provide services on Combined Heat and Power (CHP) and Gas Conditioning System (GCS)

| Contract # | Vendor Number | Contractor & Address  | Telephone No. |
|------------|---------------|---|---------------|
| BID 23-072 | 0000028116    | Martin Energy Group Services, LLC<br>34 West Mohler Church Rd.<br>Ephrata PA 17522<br><br>Attn: Leon Burkholder<br><a href="mailto:lburkholder@martinenergygroup.com">lburkholder@martinenergygroup.com</a> | 717-738-0010  |

# County of Rockland CONTRACT

## Dept. of General Services

Purchasing Division  
50 Sanatorium Rd  
Bldg A, 6th Fl, Room 609  
POMONA NY 10970  
www.rcpurchasing.com

**Dispatch via Print**

|   |  |                                      |
|---|--|--------------------------------------|
| <b>Contract ID</b><br>23-072                      |  | Page<br>1 of 2                       |
| <b>Contract Dates</b><br>03/01/2024 to 02/28/2029 |  | <b>Currency</b><br>USD               |
| Combined Heat & Power Maintena                    |  | <b>Contract Maximum</b><br>99,000.00 |
| <b>Freight Terms</b>                              | <b>Buyer Email</b><br>phillipm@co.rockland.ny.us |                                      |
| <b>Buyer</b><br>PHILLIPS, MICHELE                 | <b>Phone</b><br>845/364-2984                     | <b>Fax</b><br>845/364-3809           |

**Supplier** 0000028116  
Martin Energy Group Services, LLC  
Leon Burkholder  
34 West Mohler Church Rd.  
Ephrata PA 17522

Phone 717/738-0010

lburkholder@martinenergygroup.com

Tax Exempt? Tax Exempt ID:

| Line # | Supplier Item | Item Desc  | Item ID     | Price        | UOM   |
|--------|---------------|--|-------------|--------------|-------|
| 1      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year One - 03/01/2024 through 2/28/2025)   | 93639962111 | 34,987.00000 | Month |
| 2      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year Two - 03/01/2025 through 02/08/2026)  | 93639962112 | 36,037.00000 | Month |
| 3      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year Three - 03/01/2026 through 02/28/2027)  | 93639962113 | 37,118.00000 | Month |
| 4      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year Four - 03/01/2027 through 02/28/2028)   | 93639962114 | 38,232.00000 | Month |
| 5      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year Five - 03/01/2028 - 02/29/2029)   | 93639962115 | 39,379.00000 | Month |
| 6      |               | Perform Maintenance to the CHP in accordance with the award of RFB-RC-2023-072 (Year Six - 03/01/2029- 02/28/2030 - not included in resolution)  | 93639962116 | 40,560.00000 | Month |
| 7      |               | Hourly Labor Rate - Monday through Friday 7:00AM-5:00PM - to be used for cost of labor for repairs and incidental work on an as needed basis and approved by an authorized representative of the Rockland County Sewer District #1 | 93639962117 | 193.00000    | Hour  |
| 8      |               | Hourly Labor Rate-Monday through Friday after 5:00PM to be used for cost of labor for repairs and incidental work on an as needed basis and approved by an authorized representative of the Rockland County Sewer District #1      | 93639962118 | 221.00000    | Hour  |

**Authorized Signature**

*Paul J. Brennan*

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| <b>Contract ID</b><br>BID 23-072                  |  | Page<br>2 of 2                       |
| <b>Contract Dates</b><br>03/01/2024 to 02/28/2029 |  | <b>Currency</b><br>USD               |
| Combined Heat & Power Maintena                    |  | <b>Contract Maximum</b><br>99,000.00 |
| <b>Freight Terms</b>                              | <b>Buyer Email</b><br>phillipm@co.rockland.ny.us |                                      |
| <b>Buyer</b><br>PHILLIPS, MICHELE                 | <b>Phone</b><br>845/364-2984                     | <b>Fax</b><br>845/364-3809           |

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Martin Energy Group Services, LLC  
Leon Burkholder  
34 West Mohler Church Rd.  
Ephrata PA 17522

Phone 717/738-0010

lburkholder@martinenergygroup.com

Tax Exempt? Tax Exempt ID:

| Line # | Supplier Item | Item Desc  | Item ID     | Price     | UOM    |
|--------|---------------|--|-------------|-----------|--------|
| 9      |               | Hourly Labor Rate - Weekends and Holidays to be used for cost of labor for repairs and incidental work on an as needed basis and approved by an authorized representative of the Rockland County Sewer District #1 | 93639962119 | 221.00000 | Hour   |
| 10     |               | Percent Markup for Materials, Rentals and Subcontracting Costs used for repairs and incidental work as approved and authorized by the Rockland County Sewer District #1. This is a 15% markup.                     | 93639962120 | 1.00000   | Dollar |
| 11     |               | Extra Work: Overnight Stay - \$100 per technician plus lodging and travel time to/from lodging. Used for repairs and incidental work as approved and authorized by the Rockland County Sewer District #1.          | 93639962121 | 1.00000   | Dollar |

TERMS AND CONDITIONS OF RFB-RC-2023-072 INCORPORATED HEREIN BY REFERENCE.

**Authorized Signature**

*Paul J. Brennan*

**COUNTY OF ROCKLAND - DGS-PURCHASING**  
 BLDG. A., 6TH FLOOR, 50 SANATORIUM RD, POMONA, NY 10970  
 TELEPHONE: 845-364-3820 / TELEFAX: 845-364-3809

**Combined Heat and Power (CHP) and Gas Conditioning  
 Systems (GCS) Maintenance Services**

**RFB-RC-2023-072**

## **SPECIFICATIONS**

A Pre-Bid and Site Visit is scheduled for August 10, 2023, 1:00PM Eastern Standard Time, at the Rockland County Sewer District #1 located at 4 Route 340, Orangeburg, NY 10962

Questions must be submitted in writing via email to [purchasing@co.rockland.ny.us](mailto:purchasing@co.rockland.ny.us) and addressed to Paul J. Brennan, FNIGP, NIGP-CPP, CPPO, Director of Purchasing. The Solicitation Number must appear in the subject line of the email communication. All questions must be submitted by 12:00 PM Eastern Standard Time on August 17, 2023

### **PART 1 – GENERAL**

#### **1. INTRODUCTION**

Specifications in this section are requirements for working at the Rockland County Sewer District No. 1. The District operates a wastewater treatment plant (WWTP) at 4 Route 340, Orangeburg, New York.

The WWTP provides sewage treatment for the Towns of Ramapo and Clarkstown and several properties in the Town of Orangetown. The WWTP has a permitted capacity of 28.9 MGD and discharges its treated effluent through an outfall pipe that discharges in the Hudson River in Piermont, New York. Appendix A contains a schematic of the WWTP. The WWTP includes two ninety (90) foot diameter anaerobic digesters for digesting the solids removed during the treatment process.

In 2020, the District installed a Combined Heat and Power System (CHP). The CHP system utilizes the digester gas produced in the anaerobic digesters to continuously produce a 633 kW of electricity with an internal combustion engine (ICE) generator. The electricity produced by this engine generator is located in the Sludge Dewatering building cogeneration room. The electricity feeds back into District's onsite electrical system and is utilized to reduce its electrical usage and demand.

In addition to the installation of the engine generator is a gas conditioning system (GCS) which is partially located in the Digester Building and partially at the Sludge Dewatering Building that treats the digester gas to remove particulates, moisture, hydrogen sulfide and siloxanes prior to the digester gas entering the internal combustion engine. Heat from the engine jacket water and exhaust is recovered and converted to hot water to heat the digester sludge to 95 deg F operating temperature. The underground hot water supply and return piping located underground below the plant south road "A-side" is also newly installed and runs between the Digester Building and the Sludge Dewatering Building. The electric power from the generator is fed through the generator switchgear and routed to the main switchgear No. 1 such that the site demand will always be greater than the engine generator output.

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### **Reciprocating Engine Power System**

The design is based on a 633 kW Jenbacher JMS 312 GS-BL with island operation capability. The JMS 312 C82/C86 is a 480 V dual fuel engine generator which has the capability to blend together both digester gas and natural gas to continuously generate 633 kW of output. The engine at 100% output on lower heat value (LHV) biogas of 434 Btu/scf is an energy input of 5,879 MBtu/hr and on LHV natural gas of 917 Btu/scf is an energy input of 5,353 MBtu/hr. The emissions from the engine for NOx and CO is less than 0.6 g/bhp-hr and 3.0 g/bhp-hr respectively. The engine generator package includes all controls, paralleling switchgear with black start capability. It also includes all jacket water and exhaust gas hot water loop equipment and controls including jacket water and exhaust gas heat exchangers, low and high temperature loop water circuit radiators, thermostatic valves, expansion tanks and the process heat exchanger and pumps for hot water supply and return for digester heating. Also included is the oxidation catalyst package and a critical grade exhaust silencer.

### **Gas Conditioning and Analyzer System**

The gas conditioning system (GCS) includes conditioning of particulates, hydrogen sulfide, siloxanes, moisture, and gas compression along with all system instrumentation and an overall control system and gas analysis system. The design is based on a quality of digester gas from the digesters with a net heat of combustion (LHV) in the range of 526 to 589 Btu/cu.ft. and gross heat of combustion (GHV) of 584 to 654 Btu/cu.ft. The design is also based on a gas quantity on average of digester gas from the digesters ranging between 135 to 205 cfm. The design conditions for the system are shown below.

1. Site Information
  - a. Minimum Ambient Temperature 0°F
  - b. Maximum Ambient Temperature 100°F
  - c. Site Elevation 0-500' AMSL
  
2. System Requirements
  - a. Minimum Gas Flow 100 scfm
  - b. Maximum Gas Flow Inlet 205 scfm
  
3. Inlet Gas Conditions
  - a. Minimum Inlet Gas Pressure 8"WC
  - b. Maximum Inlet Gas Pressure 10"WC
  - c. Minimum Inlet Gas Temperature 80°F
  - d. Maximum Inlet Gas Temperature 100°F
  - e. Relative Humidity 100%
  - f. Methane (CH<sub>4</sub>) 50-60%
  - g. Carbon Dioxide (CO<sub>2</sub>) 40-50%
  - h. Nitrogen (N<sub>2</sub>) <1%
  - i. Oxygen (O<sub>2</sub>) <1%
  - j. Hydrogen Sulfide (H<sub>2</sub>S) 500 ppmv

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- k. Siloxanes (L2, L3, L4, L5, D3, D4, D5, D6) discharge 4,000 ppbv
4. Discharge Gas Conditions
- |                              |                          |
|------------------------------|--------------------------|
| a. Discharge Gas Pressure    | 7.0 psig                 |
| b. Blower Discharge Pressure | 5.0 psig                 |
| c. Discharge Gas Temperature | 80°F                     |
| d. Dew Point Temperature     | 40°F                     |
| e. Maximum Hydrogen Sulfide  | 10 ppmv                  |
| f. Maximum Siloxane          | 100 ppbv                 |
| g. Particulate Removal       | 99% removal of >3 micron |

The standalone hydrogen sulfide and siloxane removal systems are electrically classified as Class1, Division 1 and are located indoors at the Digester Building and the Sludge Dewatering Building, respectively. The skid mounted gas compression/moisture system is also electrically classified as Class 1, Division 1 and is located outdoors at the Digester Building gas compressor room. The standalone glycol chiller is unclassified and is located outside the Digester Building. The gas analysis system measure inlet and outlet H<sub>2</sub>S of the removal system, engine inlet biogas CH<sub>4</sub>, CO<sub>2</sub> and O<sub>2</sub>.

**Hot Water Supply and Return (HWS/R) System and Digester Gas Supply System**

The HWS/R system is based on supplying 200 deg F at 145 gpm process water from the heat released from the engine jacket water and the heat recovered from the engine exhaust to the Sludge Heater Heat Exchanger in the Digester Building Gas Compression room. The process heat exchanger will transmit 2,611,600 Btu/hr to the Sludge Heater Heat Exchangers in the Digester Building Gas Compression room. The cold side of the Sludge Heater Heat Exchanger is connected to the Sludge Heater's in the Sludge Heater Room. Booster Pumps take suction from the base on the front tube sheet on the boiler side of the Sludge Heater, boiler waterflows through the Sludge Heater Heat Exchanger in the Gas Compression Room and then discharges 190 deg F water into the top of the Sludge Heater heat exchange section to heat the digester sludge heater heat exchange tubes. The Sludge Heater heat exchanger will transmit 2,611,600 Btu/hr to the Sludge Heater Heat Exchanger in the Digester Building Gas Compression room. The new HWS/R piping loop is approximately 1,800 feet in total length, 4 in. diameter poly pipe and will connect to the existing steel HWS/R piping inside the Digester Building as it penetrates the building. It terminates its run at the process heat exchanger in the Sludge Dewatering Building cogeneration room. The selected piping material is Aquatherm SDR 9 Blue Pipe which is polypropylene-random (PP-R), a thermoplastic that includes heat-fused connections and naturally corrosion-resistant properties. At 145gpm and 4.2ft/sec of velocity, the piping loop will have a 10 psi. pressure drop and will hold a volume of 1,070 gallons of water.

The digester gas piping system is based on delivering 135 to 205 cfm of digester gas from the Digester Building gas compressor room to the Sludge Dewatering cogeneration room approximately 900 feet in length. The 6 inch HDPE gas pipe connects to the outlet of the gas drying skid in the Digester Building gas compressor room and then penetrate to Digester Building plant south wall and is routed with the HWS/R piping to the Sludge Dewatering Building. The gas being carried by the digester gas pipe will be mechanically dewatered in the condensate manhole which will be located in the Sludge Dewatering

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Building cogeneration room. From the mechanical dewatering system in the condensate manhole, the digester gas pipe connects to the biogas inlet connection on the engine.

**Electrical Interconnection**

In the Sludge Dewatering Building next to the cogeneration room is the generator switchgear room where the new generator synchronizing switchgear resides. From the new generator, a low voltage 480V feeder cables of 500 MCM cable run to outdoor 480V substation No. 5 bus. From substation No. 5, the new feeder cables run to the 13kV service which is utilized to connect substation No. 5 to 13kV service. For overcurrent protection, the existing reverse overcurrent relay (67) is utilized in substation No. 5 to trip the breaker upstream of the step-up transformer. Also, for reverse power protection at both the Preferred and Alternative 13kV Main Switchgear, the existing reverse power relay (32) has been programmed to trip the breaker on service feeder which runs to Substation No. 5.

The work requirements listed in this specification is work that is to be performed by the Contractor at this facility to maintain the equipment and systems discussed and referenced as the CHP systems.

Before submitting a bid, bidder must become fully familiar with the systems that have been installed. A Contractor shall not plead misunderstanding or deception because of estimates of quantities, character, location, or other conditions surrounding the same. Permission will not be given to modify or explain any proposal or bid after it has been opened.

**2. SCOPE OF WORK**

- A. The Contractor shall provide a 5-year maintenance service, on-call emergency support and extended warranty coverage. Work to include Performance and Maintenance Guarantee to perform service to meet input, output, efficiency, heat recovery, availability (> 92% annually) and emissions performance guarantees.
- B. The Contractor shall perform all services on Combined Heat and Power (CHP) and Gas Conditioning System (GCS) except for daily walk thru. The District will perform the daily walk thru. The system maintenance shall maintain the following:

|                       |                                     |
|-----------------------|-------------------------------------|
| Total Years:          | 5 years                             |
| Percent (%) Run Time: | Greater than 92% annually           |
| Run hours:            | Great than 8,059 hours annually     |
| kWh:                  | Great than 5,101,473.6 kWh annually |

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| <b>GE Jenbacher JMS 312 System Performance @ 1.0PF</b> |                                     |               |
|--|-------------------------------------|---------------|
| Electric Output  | 633 kW, 480V, 1.0PF                 |               |
| Fuel Input-  | 5.579 MMBTU/HR<br>LHV of 917 BTU/CF | +5% tolerance |
| Heat Rate  | 8813 BTU/kW                         | +5% tolerance |
| Electric Efficiency                                    | 36.8%                               | -5% tolerance |
| Hot water recovery                                     | 2.733 MMBTU/HR                      | -8% tolerance |

*The ratings in this specification are valid for full load operation at a site installation of 750 ft and air intake temperature up to 90°F. Thereafter a derate of 0.89%/°F will occur until an air intake temperature of 104°F. Thereafter a derate of 1.1%/°F will occur.*

| <b>GE Jenbacher Projected Emissions</b> |                  |                   |
|---|------------------|-------------------|
| <b>Emission</b>                         | <b>Untreated</b> | <b>Treated</b>    |
| NOx                                     | .6 grams/bhp-hr  | .6 grams/bhp-hr   |
| CO                                      | 3.0 grams/bhp-hr | .25 grams/bhp-hr  |
| VOC                                     | .4 grams/bhp-hr  | .115 grams/bhp-hr |
| Formaldehyde                            | .4 grams/bhp-hr  | .065 grams/bhp-hr |

C. The GCS to supply clean, dry biogas to the Jenbacher engine consists of the following:

- 1) Hydrogen Sulfide Removal System,
- 2) A Gas Compression/Moisture (Drying) System,
- 3) A Glycol Chiller,
- 4) A Moisture Separator/Particulate Removal System,
- 5) A Siloxane Removal System
- 6) A Biogas Analyzer System,
- 7) Instrumentation System
- 8) Control Systems

D. The Digester gas first enters the Hydrogen Sulfide Inlet Moisture/ Particulate Filter before flowing into the Hydrogen Sulfide Removal Vessels. The vessels contain a fixed bed media filter that remove hydrogen sulfide from the gas. The media is AxTrap Media 4142 (H2S) as manufactured by Axens Solutions. After the hydrogen sulfide removal process, the gas is then sent to the Gas Compression/Moisture Removal System.

E. The gas will enter the Gas Blower Inlet Moisture/Particulate Filter before passing through a Gas Blower. After compression, the gas enters a Dual Core Heat Exchanger. The first stage uses the heat from the blower discharge gas to re-heat, the cold gas from the second stage. The second stage uses chilled glycol from the Glycol Chiller to cool the gas. The Chiller is manufactured by Marrone Company Inc Cold Shot Chiller Model ACWC-180-E- LT-0-6. After re-heat the gas will be sent to the Moisture Removal/Particulate Filter and then to the Siloxane Removal System.

F. The gas then enters the Siloxane Removal Vessels, which are fixed bed media filters, designed to remove siloxanes from the gas. The media is AGM Part Number 920005 Silica Gel Type A 2-5 mm as manufactured by AGM Container Control Inc. After the siloxanes are removed, the gas is then sent to the Biogas-NG CHP System.



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G. The Equipment and Sub-Systems to be maintained includes all equipment, fluids, media, piping, gauges, valves, analyzers, meters, controls, insulation, and performance of each system. The equipment and sub-systems include but is not limited to the following:

**ENGINE**

- 633 kW Jenbacher JMS 312 GS-BL
- The Jacket Water Heat Exchanger (EX-1) is an Accu-Therm Plate Heat Exchanger Model AT40ICLF-80 as manufactured by the Paul Mueller Company.
- Secondary Containment Aboveground Supply Oil Tank 500 Gallons as manufactured by Highland Tanks and Manufacturing Company Inc.
- Secondary Containment Aboveground Waste Oil Tank 1,000 Gallons as manufactured by Highland Tanks and Manufacturing Company Inc.

**HYDROGEN SULFIDE REMOVAL SYSTEM**

- Hydrogen Sulfide Removal Media Vessel
- Work Platform and Ladder
- Initial Charge of H<sub>2</sub>S Removal Media
- The media is AxTrap Media 4142 (H<sub>2</sub>S) as manufactured by Axens Solutions.

**GAS COMPRESSION/MOISTURE REMOVAL SYSTEM**

- Gas Blower Inlet Moisture/Particulate Filter
- Gas Blower
- Gas blower lubrication system with cycle control
- Shell and tube heat exchanger for gas-to-gas heat reclamation and gas precooling
- Shell and tube heat exchanger for glycol chilling
- Solenoid controlled condensate drain system
- Skid Base
- The Sludge Heat Exchanger (EX-2) is a Accu-Therm Plate Heat Exchanger Model AT40ICLF-80 as manufactured by the Paul Mueller Company.
- The Drying Skid is a Martin Energy Group Model GSG-400H as manufactured by the Martin Energy Group.

**GLYCOL CHILLER**

- Glycol Chiller
- Initial fill was Propylene Glycol/Water Mixture
- The Chiller is manufactured by Marrone Company Inc Cold Shot Chiller Model ACWC-180-E\_LT-0-6.

**MOISTURE PARTICULATE FILTER/CONDENSATE KNOCK OUT**

- Moisture/Particulate Filter Vessel
- Condensate Pump

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- Instrumentation and Controls
- Fasteners

**SILOXANE REMOVAL SYSTEM**

- Siloxane Removal Media Vessels
- Work Platform and Ladder
- Initial charge of Siloxane Removal Media
- Siloxane Removal Final Particulate Filter Control system
- The media is AGM Part Number 920005 Silica Gel Type A 2-5 mm as manufactured by AGM Container Control Inc.
- The biogas filter is Martin Energy Group Model GF-04 as manufactured by Martin Energy Group.

**GAS CONDITIONING SYSTEM CONTROL, GAS ANALYSIS AND INSTRUMENTATION**

- Gas Conditioning System Control Panel
- Gas Analysis Panel
- Instrumentation

- H. Specific details of each of the systems discussed within this specification are described in more detail within the Operations and Maintenance (O&M) documents contain in the Appendix C.
- I. The entire CHP and GCS systems were installed under a New York State Energy Research and Development Authority (NYSERDA) grant program. The performance guarantees outlined in the scope of work are NYSERDA metrics for the Contractor’s performance maintenance to achieve.

The CHP and GCS systems began start up around June 2021. Since this date there have been 11 scheduled maintenance services and 1 repair performed. The NYSERDA acceptance of these systems was established in June 2022.

The maintenance required in this request is to continue the maintenance schedules as outlined in the Appendix Sections D and E, while achieving the input, output, efficiency, heat recovery, availability (>92% annually) and emissions that NYSERDA accepted in 2022.

Data transmission happens every day at 12:01 AM to the previous data automatically via a File Transfer Protocol (FTP) to NYSERDA’s FTP server. The Contractor is responsible to ensure that the data transfer happens each day and makes appropriate repairs to ensure the data transfer continues. All costs related to this service, including the internet system connection, is to be built into the Contractor’s bid.

Additionally, a Modbus TCP Communication or Ethernet IP communication is required to connect to the Owner’s SCADA system. The ethernet cable from the CHP and GCS systems exist. The Contractor will make available the systems Matrix with tag names for the Owner’s SCADA

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contractor to interface under a separate contract unrelated to this RFP. All requested data will be sent to the SCADA system.

To date, the CHP and GCS systems have approximately 16,000 hours of operation since its initial startup.

- J. The Contractor shall include in its First-Year bid price, the cost for the removal and replacement of the hydrogen sulfide media from the Media Vessels. Cost for testing and disposal of the media is to be included in the First-Year bid price.
- K. The Contractor shall provide all scheduled labor, parts, and scheduled maintenance operations required per the engine and Combined Heat and Power System (CHP) and Gas Conditioning System (GCS) manufactures' supplied information, on a budgeted basis to ensure that the CHP System maximizes the number and availability of Operational Hours, and ensures the reliable, efficient and cost-effective operation of the CHP System as supplied. The Contractor will continue the scheduled maintenance based on the actual run hours of the system at the date of the executed contract. The Contractor shall be required to test the media in the H2S and Siloxane Scrubbers **annually** or more as indicated by the manufactures.
- L. Unscheduled repairs will be brought to the attention of the District and repaired on a timely basis if not observed first by the Contractor through site visits or monitoring. Contractor must provide priority response to unscheduled maintenance service requests within 48 hours.
- M. The scope of this Contract includes all parts, material, equipment, consumable lube oil and labor necessary for the safe and efficient operation of the CHP System as it pertains to a Scheduled Maintenance program. The Contractor shall independently tailor the Maintenance schedule based on its expertise in the area of service and maintenance and shall modify the schedule based on real time monitoring and inspections of the System.
- N. The scope of this Contract also includes all parts, material, equipment, consumable lube oil and labor necessary for the safe and efficient operation of the GCS System as it pertains to a Scheduled Maintenance program. The Contractor shall independently tailor the Maintenance schedule based on its expertise in the area of service and maintenance and shall modify the schedule based on real time monitoring and inspections of the System.
- O. The CHP system is connected via an Internet Connection to the Contractor remote monitoring system, which will provide data collection, analysis and reporting functions, and responses to all alarms raised by the system. The Contractor must be fully versed in the existing internet connection and be able to monitor the system for potential problems and prepare all NYSERDA reports, as required.

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- P. Contractor must provide monthly reports including: CHP unit runtime, CHP availability, daily and monthly totals of kWh production, daily and monthly totals of heat (mmbtu) recovered to RCSD#1, daily and monthly totals of heat rejection (mmbtu), average CHP unit output kW, scheduled and unscheduled maintenance activities, and spare parts inventory.
- Q. The internet connection also provides data signal of these systems to the District’s SCADA system. For purposes of this bid, the Contractor must maintain the systems field signals to the District’s SCADA system.
- R. For bidding purpose Appendix D lists the minimum Jenbacher Maintenance (CHP) services that is to be used to prepare a bid. The Maintenance schedule will assume the system hours at the date of contract execution and continue the schedules maintenance required based on those hours going forward.
- S. For bidding purpose Appendix E lists the minimum Ancillary Maintenance (CHP and GCS Systems) services that is to be used to prepare a bid. The Maintenance schedule will assume the system hours at the date of contract execution and continue the schedules maintenance required based on those hours going forward.
- T. Appendix F contains the As-Built Drawings of the system that was approved by NYSERDA. The As-Built Drawings will need to be updated should any changes to the CHP and GCS systems occur during the contract period. Changes to the As-Built Drawings must be made within 180 days of the system modification. The Owner is not to incur any additional cost for these changes.
- U. In addition to the maintenance listed in the CHP Maintenance and Ancillary Maintenance schedules, the Bidder should review the O&M documents and be fully aware of the requirements needed to maintain the CHP system. Including the system performance, all parts, equipment, consumable lube, coolants, software, and labor.
- V. The Contractor may hold strategic spare parts for the CHP System on site or at its premises at its cost. Supplier of parts shall not be responsible for any delays caused the Contractor delays caused by the lack of availability of necessary parts or equipment. The Contractor is responsible for the security of all spare parts that are stored on site.
- W. Contract or must be on site within 24 hours of RCSD#1 notification of system not functioning correctly.
- X. Contractor must provide all system software upgrades as released by the manufacturer including the electrical installation and program labor at no cost to the RCSD#1.
- Y. Work shall commence within five (5) days from the notice to proceed.

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- Z. On-site work shall be performed between the hours of 7:00 AM and 4:00 PM, Monday through Friday. No work shall be performed outside of these hours without written authorization from the District representative.
- AA. All waste oil during oil changes will go into the waste oil tank. RCSD#1 will be responsible for the cost of the removal and dispose of the waste oil. When the waste oil tank needs to be emptied, the Contractor will give RCSD #1 two (2) weeks notice.
- BB. **USE OF PREMISES** On or about the premises and adjacent areas, the Contractor shall ensure that all apparatus, storage of materials, and activities of workmen be confined to the limits indicated by law, ordinances, permits and the direction of the authorized County of Rockland representative, and shall not encumber or permit the premises or adjacent areas to be encumbered with such materials or apparatus. The work site shall be kept in an orderly and safe fashion so as not to interfere with the progress of the work or the work of any other Contractor. The Contractor shall be responsible for repairing and replacing anything damaged by his operations, within fifteen (15) days after notification by the authorized County of Rockland representative that damage has occurred. It shall be the responsibility of the Contractor to report, to the authorized County of Rockland representative, any damages found prior to any work at this site.
- CC. **CLEAN UP** The Contractor shall at all times keep the premises and adjacent areas free from accumulations of waste material or rubbish. At the completion of the work, he/she shall remove from and about the premises, including adjacent areas, all rubbish, tools and surplus materials used for work and shall have the area "Broom Clean" and ready for use. In case of a dispute, County of Rockland may remove rubbish and clean up, then may charge the Contractor either by deduction of amounts unpaid to the Contractor, or by other means as determined to be fair and equitable by the authorized County of Rockland representative.
- DD. **SITE DAMAGE** Any damage to buildings, equipment, utilities, finished surfaces, or the property of the County of Rockland resulting from the performance of this contract shall be repaired by the Contractor at the Contractor's expense at no cost to the County of Rockland. Completed repairs shall be accepted and approved by the authorized representative of the County of Rockland.

### 3. PRICING

**a. Bidder shall enter in pricing in accordance with the proposal pages**

- Lump Sum pricing to include all labor, supervision, material and equipment to perform the required maintenance services to the (CHP and GCS Systems) as listed in Appendix D - Jenbacher Maintenance (CHP) and Appendix E – Ancillary Maintenance (CHP & GCS Systems). Pricing must include all travel, fees, accommodations, and any other cost incurred by the Contractor. Additional fees or charges of any kind will not be reimbursed.

**i. Pricing shall be entered for each year of this contract as listed.**

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- In addition to the maintenance listed in the CHP Maintenance and Ancillary Maintenance schedules, the Bidder should review the O&M documents and be fully aware of the requirements needed to maintain the CHP system. Including the system performance, all parts, equipment, consumable lube, coolants, software, and labor.
- b. Bidder must enter an hourly rate to be used for cost of labor for repairs and incidental work on an as needed basis and approved by an authorized representative of the Rockland County Sewer District #1. Hourly rate provided must be valid for the first year of this contract. Repair work costing in excess of \$35,000.00 must be reviewed and approved by the County of Rockland Purchasing Division and/or Rockland County Sewer District #1.
- c. Bidder must offer a percentage above the current NYS prevailing wage rate (project specific PRC is included in this solicitation). Upon approval and authorization of the Rockland County Sewer District and calculated by the Rockland County Purchasing Division, this percentage may be added to the current hourly rate for all work within the category for each year commencing on year 2 through year 5. Bidder must also provide labor classification to be used.

**i. PREVAILING WAGES:**

All vendors submitting bids agree to conform to all New York State (“NYS”) and federal Department of Labor and prevailing wage laws. The County has applied for and has received PRC number for this project, which, if applicable, have been included with this document as an attachment. The successful vendor(s) is/are responsible for complying with all current labor rates and regulations throughout the duration of any contract resulting from this bid. For policy or rate questions call the NYS Department of Labor at (585) 258-4505. Actual rates are available via the internet at: <http://www.labor.ny.gov/workerprotection/publicwork/pwratesch.shtm> or for questions regarding federal labor rates and policy questions call 1-866-487-2365.

Bidder must enter a percent markup to be added for all materials, rentals and subcontracting cost used for repairs and incidental work as approved and authorized by the Rockland County Sewer District #1.

**4. PRICE ADJUSTMENT –**

- a. The County recognizes this product or service has a price component that may have a commodity with changing costs. The Contractor/Supplier may request a Price Adjustment no more frequently than once each quarter (3-month period).

A Price Adjustment request must be made in writing and include the reason for the request, documentation supporting the request (ie, commodity increases), the current pricing, and the requested revised pricing.

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The County will review the Price Adjustment request. If the Price Adjustment is deemed reasonable the Price Adjustment request will be accepted by written acknowledgement. If the request is not accepted the County may entirely reject the request or may counter with revised pricing. In either case the County will provide a written explanation in support of the decision.

The Director of Purchasing may use available indexes (e.g. CPI or PPI) to determine if the requested Price Adjustment is reasonable. Typically, a Price Adjustment that exceeds 5% will not be approved unless very unusual and significant changes have occurred in the industry.

In the event industry costs decline, the County shall have the right to receive, from the Contractor, a reasonable reduction in prices/pricing that reflect such cost changes in the industry. The County will make a written request to the Contractor for a Price Adjustment in writing with supporting documentation.

**5. PRICING FOR LABOR AND MATERIAL**

The Contractor shall be paid for each repair job as authorized by Rockland County upon submission of properly executed invoices. Repair project in excess of \$35,000.00 must be authorized by the County of Rockland Purchasing Division and / or Rockland County Sewer District #1. Invoices shall be submitted according to these requirements:

Labor Charges: Contractor shall submit an hourly labor price as per attached pricing schedule, for twenty-four hours, seven days a week service calls as may be required at all Rockland County government facilities. The invoice must list specifically the number of man-hours worked. The Contractor’s labor charges must correspond to the rates, which he will supply with the bid.

Detailed description of all completed service work must accompany all invoices.

Contractor shall bid a labor rate in dollars per man-hour for a technician to make required repairs, replacements, and troubleshooting.

The bidder agrees and hereby certifies that all labor charges contained in the invoices and vouchers shall be only those that were required and necessary to complete the work.

Invoices for labor must be billed to the next quarter hour of actual time worked (example: 8:00 AM to 9:10 AM would be billed at 1 hour and 15 minutes). Invoices rounded to the next full hour will not be approved for payment.

The County of Rockland shall not pay for Lunch breaks and any additional company approved break times. The County will only pay for the time working on-site.

This is a Prevailing Wage solicitation. Awarded contractor shall provide certified payrolls with each invoice as per the NYS Department of Labor Prevailing Wage Law.

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- Material Costs: The invoice must list specifically all parts, which the Contractor has purchased from other sources and the cost to him/her for each. Receipts for all materials purchased which cost more than \$1,000.00 must be submitted with each invoice. The bidder agrees and hereby certifies that all parts and materials which he/she purchases shall be at the lowest price available at the time considering the prevailing conditions and circumstances for which it is required that the purchase be made. No invoices will be paid without this documentation.
  - Markup: The Contractor shall add a fixed percentage above described material charges to the invoice for payment. The percent markup must correspond to the figure entered in the proposal page of this bid. **Mark-up not to exceed 15%**. Bidder shall enter a % mark-up between 0%-15% on the proposal pages. **There shall be no mark-up on freight.**
- Additional Items: If the Contractor expects to incur any additional costs not specified in the above paragraphs, he/she must submit a list of those items and corresponding charges or schedule with his bid. There shall be **no additional charge for delivery or mileage**. No other costs except those placed in the bid proposal at the time the bid is submitted shall be evaluated, considered or deemed acceptable charges by the County of Rockland.

Contractor shall receive a purchase order number from the Purchasing Department prior to commencing any work.



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**6. WARRANTY**

All work and equipment provided under this contract must be warranted for a one (1) year term. Contractor, its subcontractors or sub suppliers shall be liable for any loss of revenues to the Owner for repairs found negligent to achieving the performance meets as discussed in Part 1.1 – Introduction and Part 1.2 – Scope of Work of the specifications.

**7. QUALITY ASSURANCE**

1. The Contractor must have in-house factory service available within 200 miles from the facility.
2. Federal, State and local laws and code requirements shall govern the hauling and disposal of media, oil and wastes.
3. All parts shall be original equipment material (OEM).

**8. EXPERINECE AND QUALIFICATIONS**

**QUALIFICATION OF CONTRACTOR**

The Contractor shall show that he/she has available under his/her direct employment and supervision the necessary organization and facilities to properly fulfill all the services and conditions required under these specifications.

The Contractor shall show that he/she has maintained an organization capable of performing the work specified herein, and that said organization has been in continuous operation for at least the past five (5) years. Contractor shall submit the following information with bid:

Present address of the main operating office of his/her organization.

Contractor shall have a minimum of five (5) years of experience in the maintenance and servicing of CHP and GCS equipment similar in size and scope to the work specified herein and complete knowledge and experience programing and maintaining of the existing control systems. Rockland County Sewer District #1 to provide required passwords to the systems.

Contractor must submit with their bid a list of five accounts for which they are presently doing such work. Reference must include contact person and telephone number. (See Certificate of Experience)

Contractor must have on staff personnel experienced in the service and repair of fueling equipment as required under these specifications. Personnel shall have 3 years of experience. This information must be provided with your bid.

The County of Rockland will perform its due diligence to determine responsible bidder. This may include inspection of the facilities specified in solicitation of the apparent low bidder prior to award to determine their capacity to perform this work.

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The successful bidder must maintain a satisfactory inventory at their facility of parts for the units specified. Bidder shall show evidence of inventory upon request.

All bidders must submit the certificate of experience with the system / equipment specified in solicitation. The Contractor is responsible for providing all tools and equipment necessary to efficiently perform all work in a professional and workmanlike manner.

Company name, contact person, address, telephone number, fax number, emergency contact and 24-hour telephone number or cell phone number.

Contractor shall provide the names of the employees in the area responsible for this contract, their function in the company, title, number of years of service with the contractor's firm and documentation indicating technical experience.

A. Qualifications: For approval, as noted above.

**PART 2 – EXECUTION**

**1. EXISTING CONDITIONS**

A. Existing Facilities:

1. The CHP system utilizes the Rockland County Sewer District’s digester gas that is produced in the anaerobic digesters to continuously produce a 633 kW of electricity with an internal combustion engine (ICE) generator. The electricity produced by this engine generator is located in the Sludge Dewatering building cogeneration room. The electricity feeds back into District’s onsite electrical system and is utilized to reduce its electrical usage and demand. The newly installed system has achieved its design performances with a complete commission and site test plan that has been submitted to the design engineer for approval prior to any testing.
2. Prior to executing this 5-year contract, the CHP installer will have provided system performance guarantee and final acceptance of the system to the District. This includes all final O&M documents and drawings for the CHP system.
3. The Contractor will be responsible for all maintenance that is required on the Jenbacher and Ancillary Maintenance Schedules. The Contractor is to be fully aware and familiar with the maintenance that is discussed in the O&M for all equipment within the CHP system
4. The District will perform the daily on-site walk thru maintenance and will update the Contractor when system conditions change.
5. All Final Operations and Maintenance (O&M) Documents will be provided the lowest responsible bidder prior to executing this 5-year contact.

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6. All As-Built Drawings will be provided the lowest responsive bidder prior to executing this 10-year contract.

**B. Confined Space Entry Requirements:**

1. The Contractor is cautioned that is classified as a permit required confined space due to the potential for combustible or noxious gases to accumulate in the form of methane gas and other gases resulting from the decomposition of sludge.
2. The Contractor shall be fully responsible for compliance with all applicable NIOSH, OSHA, federal, state and local codes.
3. The Contractor shall prepare a complete confined space entry plan to be used for this project. The Contractor shall always maintain a copy of the confined space entry plan in his field office or on the job site, available for review.
4. Prior to the start of work on-site, the Contractor shall submit a listing of personnel who have completed training in accordance with the confined space entry plan and are certified for confined space entry.
5. The Contractor shall be responsible for ensuring that only those personnel who have received proper training perform any work requiring confined space entry.
6. The Contractor is responsible for supplying the necessary confined space equipment and is responsible to fulfill the rescue requirements mandated by the OSHA requirements for confined space entry.
7. All electrical equipment shall be of explosion proof construction complying with all requirements for Class I, Division 1, Group D, Hazardous Locations as defined by the National Electric Code and with all other safety codes pertaining thereto. All mechanical equipment and tools shall be spark proof.

**PART 3 – MEASUREMENTS, PAYMENTS AND AWARD**

Award of this contract shall be made to the lowest responsive, responsible bidder meeting the stated requirements.