



City of Alcoa Purchasing

223 Associated Blvd. Alcoa, Tennessee 37701

(865) 380-4700 FAX (865) 380-4797

REQUEST FOR PROPOSAL

The City of Alcoa is accepting Requests for Proposals (RFP's) for the removal and replacement of the Variable Frequency Drives (VFD's) and auxiliary equipment that operate the high service pump motors and pumps at the City's Water Treatment Plant. RFP's will be accepted until 10:00 a.m., Wednesday, May 25, 2022 at the office of the Alcoa Purchasing Agent, 223 Associates Blvd., Alcoa, Tennessee, 37701.

Proposals may be submitted via U.S. Mail / UPS / FedEx, etc., hand delivered, or e-mailed to coasealedbid@cityofalcoa-tn.gov Regardless of the mode, the Vendor shall be responsible for the early delivery of their proposal. Mailed or hand-delivered proposals should be in a sealed envelope and labeled "Water Treatment Plant Variable Frequency Motors Replacement", RFP #24166, Proposal Enclosed, Wednesday, May 25, 2022, 10:00 a.m." The subject line of e-mailed proposals shall state the same. Proposals received after the deadline will be unopened and discarded.

Proposals shall be addressed to:

City of Alcoa
Attn. Laurance Harper, Purchasing Agent
223 Associates Bld.
Alcoa, TN 37701

The City reserves the right to accept or reject any proposal, to accept a proposal containing variations from these specifications if the proposal so merits, to negotiate with the lowest bidder prior to acceptance, and to accept partial Proposals. Proposals must be submitted on the form issued by the City and must be completed (in ink) and signed accordingly.

The City of Alcoa reserves the right to waive any formality in any solicitation, to reject any or all proposals, and to accept the best proposal for the City as determined by City Officials. The City also reserves the right not to enter into any contract as a result of this RFP.

Questions regarding this solicitation may be directed to Laurance Harper, Purchasing Agent, via telephone (865) 380-4822 or e-mail lharper@cityofalcoa-tn.gov. Any questions regarding this RFP shall be submitted no later than 48 hours prior to the deadline.

This solicitation has been developed in accordance with Title VI of the Civil Rights Act of 1964 which provides that no person shall, on the grounds of race, sex, age, national origin, or disabling condition, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Thank you in advance for your interest in doing business with the City of Alcoa.

Sincerely,

Purchasing Agent

CITY OF ALCOA INSTRUCTIONS TO PROPOSERS

Proposal Evaluation

In addition to the bid amount, additional factors will be considered as an integral part of the evaluation process, including, but not limited to:

- A. The Vendor's experience, reputation, efficiency, judgment, and integrity.
- B. The quality, availability and adaptability of the requested products or services.
- C. The Vendor's ability to provide future maintenance and/or services.
- D. Any other applicable factors as the City determines necessary and appropriate (which may be requested by the city prior to award).

Award of Contract

The City holds the right, in its judgment, to award the contract to the vendor(s) which it feels is in the best interest of the City. If a contract is to be awarded, the Contractor/Vendor selection shall be based in whole or in part on the evaluation noted above. No submittal shall be withdrawn for a period of sixty (60) days subsequent to the opening of proposals without the consent of the City of Alcoa.

Laws, Permits and Regulations

The Contractor shall comply with all Federal, State and Local laws, ordinances, regulations, and requirements applicable to work hereunder. If the Contractor ascertains at any time that any requirement of this Contract is at variance with applicable laws, ordinances, regulations, or other requirements, she/he shall promptly notify the City of Alcoa in writing.

Cancellation of Award

The City reserves the right to cancel the award of any contract at any time before/during the execution of such contract by all parties without any liability against the City. The Vendor is advised that if in the event appropriated funds are legitimately unavailable for this product in successive fiscal years, such purchase orders resulting from this RFP are null and void.

Cooperative Purchasing

Unless stated otherwise, vendor agrees that it shall be permissible for other governments in Tennessee to purchase these items or services at the same price. Freight charges may be adjusted to reflect differences in delivery costs.

Delivery

The successful Vendor shall contact the Purchasing Agent for delivery / installation instructions. The approved product shall not be shipped / installed under any circumstances without prior instructions.

Request for Proposals

Replacement of Water Treatment Plant Variable Frequency Drive Motors for the City of Alcoa – Public Works & Engineering Division

May 25, 2022

1. INTRODUCTION

- (a) This Request for Proposals (RFP) is being extended by the City of Alcoa (COA) to obtain submissions to:
1. To safely remove and dispose of the existing Variable Frequency Drives (VFD's) for the existing 700 horsepower high service pumps located at the City of Alcoa Water Treatment Plant (WTP), according to accepted and safe environmental practices.
 2. To install and test new VFD's compatible with the existing high service pumps, which will not be replaced.
 3. To install and test VFD's individually in such a manner that at a minimum two (2) high service pumps remain in operation at all times.
- (b) All interested parties are directed, prior to bidding, to conduct on-site investigations and data collection at the WTP in order to evaluate existing conditions and connections, and to understand any constraints which will affect the bid. Appointments for these visits can be scheduled through T.J. Emory, Chief Operator/Supervisor of the City of Alcoa Water Treatment Plant, at (865) 380-4921.
- (c) The original 2007 high service pump specifications and Operations and Maintenance manual for the existing VFD's are available for inspection at the WTP as a guide to existing conditions for preparation of the bids.
- (e) The COA is not liable for incurred costs or expenses in the development of the proposed RFP.
- (f) Additional questions may be directed to:
- T.J. Emory, Chief Operator/Supervisor of the City of Alcoa Water Treatment Plant at (865) 380-4921;
 - Shane Snoderly, Public Works & Engineering Director at (865) 380-4800;
 - David Marcum, Senior Civil Engineer at (865) 380-4800

2. GENERAL / BACKGROUND

- (a) The current City of Alcoa Water Treatment Plant, 302 Sam Houston School Road, Maryville, TN, was constructed in 2007. With a rated capacity of 16 million-gallons-per-day (MGD) and upgradeable to 24 MGD, the Alcoa WTP treats between 8 and 10 MGD, and is the largest membrane water filtration plant in Tennessee. Through 240-plus miles of water mains, the plant serves the City's 10,000-plus water customers (households and businesses), as well as the

Tuckaleechee Utility District. Water is also provided on an as-needed basis to the City of Maryville and the Knox-Chapman Utility District.

(b) Three (3) Variable Frequency Drives (VFD's) were installed at the WTP in 2007 at the time of construction, and these have not been replaced since that time.

(c) Existing High Service Pumps Manufactured by Simflo Pumps:

1. Make: U.S. Motors
2. No. of Pumps: 3
3. Horsepower (HP): 700
4. Service Factor (SF): 1.5
5. Revolutions-per-minute (RPM): 900
6. Phase: 3
7. Cycle: 60
8. Voltage: 460
9. FLA (Full Load Amps): 852.0
10. SFA (Service Factor Amps): 973.0
11. Gallons-per-minute (GPM): 7,500 (10.8 MGD)
12. Total Dynamic Head (TDH): 262-feet
13. Other Motor Info:
 - (i) Premium efficient inverter duty;
 - (ii) 40° C ambient; 3,300-feet elevation;
 - (iii) 120 V space heater;
 - (iv) B10 5-year bearing;
 - (v) Class F insulation;
 - (vi) Aux. J box with terminal strips;
 - (vii) Corro duty (Insulife 2000 & cast iron box);
 - (viii) Insulated bearings (both);
 - (ix) 100 Ω winding RTD's;

- (x) 175% EHT bearing

3. SCOPE OF WORK

- (a) The Vendor shall furnish and install VFD's to replace existing VFD's in their existing locations. The provided product shall be "turnkey" – *i.e.* installation of a complete product that is ready for immediate use. The Vendor shall provide all wiring, interconnection, start-up, and test services to accommodate variable speed motor operations for the existing high service pumps.
- (b) Auxiliary Components: The Vendor shall furnish and install the VFD's as specified, complete with auxiliary components as required, including enclosures, transformers, filters, fuses, motor protection, circuit breakers, switches, indicating lights, engraved nameplates, signal transducers, and other components and accessories as necessary.
- (c) Plant Interface: The Manufacturer shall furnish and install necessary control relays, transducers, power supplies, or other instrumentation equipment within the VFD;s as required to interface with the plant Control System to produce a completely operational system.
- (d) The Vendor shall work with the City's SCADA Vendor (MR Systems) to ensure that the new VFD's are able to interface with existing City SCADA Controls.
- (e) Enclosure: The Manufacturer shall provide an enclosure for the VFD's. The enclosure shall be ventilated or otherwise adapted to control heat and prevent entrance of moisture or corrosive or hazardous materials in accordance with the VFD manufacturer's specifications.

4. SUBMITTALS

- (a) Codes and Standards:
 - 1. Provide equipment in full accordance with the latest applicable rules, regulations, and standards of:
 - (i) National Electric Code (NEC)
 - (ii) Underwriters' Laboratories (UL)
 - (iii) American National Standards Institute (ANSI)
 - (iv) National Electrical Manufacturers Association (NEMA)
 - (v) Institute of Electrical and Electronics Engineers (IEEE)
 - (vi) International Electro-technical Commission (IEC)
 - (vii) Federal Communications Commission (FCC)
 - 2. VFDs shall be manufactured, assembled, tested, and provided with a UL label.
 - 3. The VFD shall be listed as suitable for the purpose specified and shown on the drawings by Underwriters Laboratory (UL), electronic Testing Laboratories (ETL), or other nationally recognized testing in accordance with UL standards.

- (b) Materials
 - 1. The VFD shall be new and contained in the original manufacturer's packaging.
 - 2. The VFD shall be currently under manufacture and shall be expected to have available, for at least ten years after completion of the contract, a complete line of spare parts.
 - 3. No deviations from the submittals as approved shall be permitted and materials purchased prior to approval shall be at the sole risk of the Vendor.
- (c) Pre-order Submittals:
 - 1. Submit product data for review including the following:
 - (i) Product Brochure.
 - (ii) Wiring diagrams for drive and bypass contactor.
 - (iii) List of optional features.
 - (iv) Installation procedures.
 - (v) List of sizes and quantity of spare drives furnished for the project.
 - (vi) List AIC rating.
- (d) Manufacturer's Installation Instructions: Submit for components being provided under this section. Indicated application conditions and limitations of use stipulated by product testing agency.
- (e) Shop Drawings: Indicate front and side views of variable frequency drive enclosures with overall dimensions. Include:
 - 1. Conduit entrance locations and requirements;
 - 2. Nameplate legends;
 - 3. Electrical characteristics including:
 - (i) Voltage;
 - (ii) Frame size; and
 - (iii) Trip ratings;
 - (iv) Termination numbers and identification of purpose; and
 - (v) Time-current curves of equipment and components.
- (f) Project Record Documents:

1. The construction drawings shall be submitted with the Vendor's markings which record the installed conditions from which the City will produce the "as-builts".
 2. Additional shop drawings produced by the Vendor shall be revised to show the "as-built" conditions prior to submittal. Submit "as-built" shop drawings and copies of computer files developed for this subcontract.
 3. Equipment locations: Show actual locations of VFDs.
 4. Mounting details: Accurately record mounting details.
 5. Software configuration: Submit documentation on the VFD software configuration including the values of parameters and constants, showing both
- (g) Operation and Maintenance Data: Furnish one (1) compact disc or flash drive of recommended maintenance procedures and intervals. Documentation shall include:
1. Manufacturer's model number
 2. Manufacturer's installation instructions;
 3. Switch settings;
 4. Adjustment procedures;
 5. Inspection period;
 6. Recommended cleaning methods and materials;
 7. Testing methods;
 8. Calibration tolerances;
 9. Spare parts data listing; and
 10. Source and current prices of replacement parts and supplies.
- (h) Warranty
1. Warranty period shall start at the date of commissioning and extend 12 months from this date. Submit digital file of the warranty certificate.
 2. Manufacturer's warranty: Materials and labor for a period of one year from date of start-up, not to exceed 36 months from date of shipment.
 3. During warranty period, any warranty expense shall be born by the manufacturer, including travel costs or living expenses necessary to repair in warranty equipment.
 4. Name, address, and phone number of the service representatives to be called in the event of equipment failure.

5. QUALITY ASSURANCE

- (a) Products shall be tested, approved, and labeled/listed by Underwriters Laboratories, Inc., or by a nationally recognized testing laboratory.
- (b) Electrical equipment and materials shall be new and comply with the latest codes and standards. No used, rebuilt, refurbished, and/or re-manufactured electrical equipment and materials shall be furnished on this project.
- (c) Manufacturer's Qualifications: Company experienced in manufacturing the products described with minimum five (5) years documented product development, testing, and manufacturing experience.
- (d) Vendor Qualifications: Company experienced in applying the work described with minimum five (5) years documented experience.
 - 1. The Vendor shall have a complete sales, installation, and service operation within the area.
 - 2. Vendor must be licensed for operations.

6. DELIVERY, STORAGE, AND HANDLING

- (a) Care shall be taken to prevent damage to materials and equipment during loading, transporting, and unloading. Packaged units shall be delivered in their original crates. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- (b) Handle in accordance with manufacturer's written instructions. Lift only with lugs provided for the purposed. Handle carefully to avoid damage to variable frequency drive components, enclosure, and finish.
- (c) Cost of delivery must be included in the bid.

7. SEQUENCING AND SCHEDULING

The vendor shall work with the City prior to delivery and throughout the process to coordinate site inspections as needed, exchange technical information, arrange VFD delivery, and schedule installation work in order to carry out the VFD replacement in an efficient and non-disruptive manner, and to maintain continuous operation of the Water Treatment Plant and the high service pumps.

8. START-UP AND MAINTENANCE

- (a) Start-up, Testing, and Demonstration
 - 1. Provide a factory trained technician to supervise the installation, start-up and testing of drives.
 - 2. Provide a minimum of one day (8 hours) instruction to maintenance personnel.
 - 3. Demonstrate the operation of the system to the maintenance and operational personnel.
 - 4. Provide all necessary coordination for test and balance procedure

(b) Maintenance/Commissioning Service:

1. Commissioning Services shall be provided by the Vendor upon installation.
2. Vendor must be factory trained and certified.
3. Ongoing services shall consist of manufacturer's factory-trained representatives providing emergency repair service with on-site response within forty-eight (48) hours of call.
4. During the warranty period, provide new or revised documentation showing changes required to solve system problems.
5. Submit written reports on each service or inspection to the City during the warranty period.
6. For the purpose of this proposal the Vendor will price 20 hours of commissioning per VFD.

9. COMMUNICATIONS

The selected VENDOR will provide the COA with telephone numbers and other contact information of the person(s) to be employed and/or contracted for administrative and field related inquiries.

10. COST, PAYMENT, AND INVOICING

The proposal will include cost for complete removal and disposal of the existing in-place VFD's, and also the cost of new VFD's, fully installed and functional, and completely connected to the existing systems. Payment for the project shall be made following the successful completion of the job.

11. QUALIFICATIONS OF THE BIDDER

All proposals will include supporting information regarding the qualifications of the proposing company, as well as information regarding any notable programs or services that bidder is managing or has managed. The supporting information should also include a description of the number of personnel, testing equipment, and other necessary equipment available for providing services. Such information will be used to determine the qualifications and experience of each company submitting a proposal.

12. WITHDRAWAL

Proposals may be withdrawn on written request received from the bidder prior to the scheduled time for opening.

13. NEGOTIATIONS / CONTRACT

The COA reserves the right to enter into a contract with the selected firm. If the COA and the selected firm cannot negotiate a successful contract, then the COA may terminate said negotiations and begin negotiations with the next highest-ranking fully qualified bidder. The selected bidder understands this Request for Proposals does not constitute an agreement or a contract between the COA and the bidder. An official and legal contract or agreement will not exist until a contract is negotiated, approved, and

signed by the appropriate governing bodies.

14. DURATION OF CONTRACT

The duration of the contract will be for a period of time determined during negotiations and included in the contract.

15. PERFORMANCE BONDS

Any bonds required by the COA will be identified during negotiations.

16. INSURANCE

Specific insurance requirements will be identified during negotiations and included in the contract.

17. COMPLIANCE WITH LAWS

The successful bidder will conduct all operations included in the proposal in compliance with all applicable local, state, and federal laws. The successful VENDOR will comply with all State and Federal regulations pertaining to minimum wage and fair labor statutes. The successful VENDOR will not discriminate in hiring or any other practice with respect to gender, race, age, creed, religion, or nationality. The COA, its officers, officials, agents, and employees shall be indemnified and held harmless for any failure by the successful VENDOR to comply with any applicable laws, rules and/or regulations. Compliance with State of Tennessee laws and statutes, including any Tennessee drug-free workplace requirements, will be included in the contract.

18. EVALUATION OF PROPOSALS

The COA will evaluate each proposal based on its own merits and factors deemed important to the Public Works and Engineering Department. All bidders are hereby notified that any and all information submitted as part of, or in support of the proposal will be available for public inspection after the opening of proposals in compliance with applicable State of Tennessee statutes. The COA reserves the right to obtain and utilize consultation services or advisement from any employee, agency, firm, corporation, company, or individual, in order to evaluate the feasibility and sustainability of any proposal. The COA reserves the right to reject any and all proposals submitted.

19. IRAN DIVESTMENT ACT

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to § 12-12-106.

Company _____ Telephone _____

Company Address _____

E-mail Address _____

Bidder's Authorized Representative Signature _____ Date _____