



Working Together for a  
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## BID SPECIFICATION PACKAGE

for

## PGS TURBINE OVERHAUL – FIELD MACHINING 2023

### C132692

#### Bid Opening Date/Time

July 25, 2023 at 2:15 p.m. (local time)  
City of Grand Island, City Hall  
100 East 1<sup>st</sup> Street, P.O. Box 1968  
Grand Island, NE 68802-1968

#### Contact Information

Tylor Robinson  
City of Grand Island – Utilities Department  
Platte Generating Station  
Email: [trobinson@giud.com](mailto:trobinson@giud.com)  
Phone: 308/385-5496

Date issued: July 7, 2023

**ADVERTISEMENT TO BIDDERS  
FOR  
PGS TURBINE OVERHAUL-FIELD MACHINING 2023  
FOR  
CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids for PGS Turbine Overhaul-Field Machining 2023 will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until **Tuesday, July 25, 2023 at 2:15 p.m. local time**, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall City Clerk's Office located on 1<sup>st</sup> floor of City Hall. **Submit an original and three copies if submitting by mail.** Bid package and any Addendas are also available on-line at [www.grand-island.com](http://www.grand-island.com) under Business-Bids and Request for Proposals-Bid Calendar under the bid opening date. Bidding documents, plans and specifications for use in preparing bids may be downloaded from the QuestCDN website [www.QuestCDN.com](http://www.QuestCDN.com) for a \$42.00 fee. Submitting through QuestCDN requires one original document of the bid to be uploaded. **Bids received after the specified time will not be considered.**

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Successful bidder shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City of Grand Island Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashiers check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** **Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered.** Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids, to waive irregularities therein, and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw his/her bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

**Advertised**

(All bids must be submitted on this form)

**PGS TURBINE OVERHAUL – FIELD MACHINING 2023**  
**BID DATA FORM**

CITY OF GRAND ISLAND  
GRAND ISLAND, NE

THE undersigned Bidder, having examined the plans, specifications, general and special conditions, and other proposed contract documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the location, arrangement and specified materials and equipment for the proposed work, HEREBY proposes to identify and communicate the valve power lapping and field machining services required for a medium steam turbine-generator inspection for a 45-day outage (breaker-to-breaker) FOB the City of Grand Island, freight prepaid, at the following price:

<u>ITEM DESCRIPTION</u>	<u>EXTENDED COST</u>
Base Bid:	
Material	\$ _____
Labor	\$ _____
Applicable Sales tax*	\$ _____
<b>Total Base Bid</b>	<b>\$ _____</b>

**Appendix C** – Bidder acknowledges per Detailed Specification section 27. Appendix C, that Breakdown prices are provided and included with the Bid.

**\* If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.**

**Exceptions Noted** - Bidder acknowledges there are *Exceptions* and/or *Clarifications* noted to the above bid, and those exceptions are fully explained on a separate sheet, clearly marked, and included with the Bid.

\_\_\_\_\_  
Bidder Company Name Date

\_\_\_\_\_  
Company Address City State Zip

\_\_\_\_\_  
Print Name of Person Completing Bid Signature

Email: \_\_\_\_\_ Telephone No. \_\_\_\_\_

According to Nebraska Sales and Use Tax Requirements, Section 1-017, Contractors, check which option you have selected to file with the Nebraska Department of Revenue:

*Nebraska law provides a sales and use tax exemption on contractor labor charges for the construction, repair, or annexation of any structure used for the generation, transmission, or distribution of electricity. Separately stated contractor labor would be exempt, all materials are taxable according to the contractor's option.*

Option 1 (Section 1-017.05) \_\_\_\_\_ Option 2 (Section 1-017.06) \_\_\_\_\_ Option 3 (Section 1-017.07) \_\_\_\_\_

*If the Nebraska sales and use tax election is not filed or noted above, the contractor will be treated as a retailer under Option 1 for sales and use tax purposes.*

By checking this box, Bidder acknowledges the specified completion date of the project is **November 4, 2023** to align with the projected outage end date.

By checking this box, Bidder acknowledges that Addenda Number(s) \_\_\_\_\_ were received and considered in Bid preparation.

Note: If Bidder supplies individual unit pricing information as supplemental pricing to the base material and labor cost above, said individual pricing is proprietary information and should not be released under a public records request. The total base bid is not considered proprietary information and will be released pursuant to City Procurement Code.

The City reserves the right to reject any bid section(s) submitted by the successful bidder. In submitting the bid, it is understood that the right is reserved by the City to reject any and all bids; to waive irregularities therein and to accept whichever bid that may be in the best interest of the City. It is understood that this bid may not be withdrawn by the bidder until after thirty (30) days from bid opening.

In submitting the bid, the bidder acknowledges the bid guarantee will be forfeited to and become the property of the City of Grand Island, Nebraska, as liquidated damages should this bid be accepted and a contract be awarded to them and they fail to enter into a contract in the form prescribed and to furnish the required bonds within fifteen (15) days, but otherwise the aforesaid bid guarantee will be returned upon signing the Contract and delivering the approved bonds.

Insurance: Bidder acknowledges that their bid includes compliance with the attached insurance requirements.

The Bidder agrees to furnish the required performance and payment bond and to enter into a contract within fifteen (15) days after acceptance of this Bid, and further agrees to complete all work covered by the foregoing bid in accordance with specified requirements. No work shall commence until the Certificate of Insurance and bonds (when required) are approved by the City and the Contract is executed. The proposed work can commence after the Contract is signed and the required bond is approved.

\*End of Bid Data Form\*

## INSTRUCTIONS TO BIDDERS

### 1. GENERAL INFORMATION.

The following instructions outline the procedure for preparing and submitting Bids. Bidders must fulfill all requirements as specified in these Documents.

### 2. TYPE OF BID.

Bidders shall be required to submit prices for all items listed in the Bid Data Form.

### 3. PREPARATION OF BIDS.

Bidders shall use only the Bid Data Form provided in these Documents. All blank spaces in the Bid Data Form must be filled in, preferably in BLACK ink, in both words and figures where required. No changes to the wording or content of the forms is permitted. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

Prices stated shall be f.o.b. with freight and full insurance paid by Bidder, to the job site located in Grand Island, Nebraska.

The Bidder shall acknowledge receipt of all Addenda in the Bid Data Form. Bids received without acknowledgement or without the Addendum enclosed will be considered informal.

Individual unit pricing as listed on the Bid Data Form or supplied as supplemental information may be deemed proprietary information and not be released under a public records request. The total amount of the bid is not considered proprietary information and will be released pursuant to City Procurement Code.

### 4. SUBMISSION OF BIDS.

All Bids must be submitted intact with the correct number of copies no later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Data Form provided herein. Each Bid mailed must be submitted intact in a sealed envelope, so marked as to indicate its contents without being opened, and delivered in person or addressed and mailed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

### 5. BID SECURITY.

Bids must be accompanied by cash, a certified check, or cashier's check drawn on a bank which is insured by the Federal Deposit Insurance Corporation, or a bid bond issued by a Surety authorized to issue such bonds in the state where the Work is located, in the amount of 5 percent of the bid amount payable to OWNER. This bid security shall be given as a guarantee that the Bidder will not withdraw their Bid for a period of thirty (30) days after bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract within the time specified.

The Attorney-in-Fact that executes this bond on behalf of the Surety must attach a notarized copy of his/her power of attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond. Where State Statute requires, certification by a resident agent shall also be provided.

### 6. RETURN OF BID SECURITY.

Within fifteen (15) days after the award of the Contract, the OWNER will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the Contract. All other retained bid

securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and guarantees which have been fortified, will be returned to the respective Bidders whose Bids they accompanied.

7. BASIS OF AWARD.

The award will be made by the OWNER on the basis of the Bid from the lowest responsive, responsible Bidder which, in the OWNER's sole and absolute judgment will best serve the interest of the OWNER. All Bids will be considered on the following basis:

Delivery time	Conformance with the terms of the Bid Documents
Bid price	
Cost of installation	
Suitability to project requirements	Responsibility and qualification of Bidder

The OWNER reserves the right to reject all Bids, or any Bid not in conformance with the intent of the Bid Documents, and to waive any informalities and irregularities in said Bids.

8. EXECUTION OF CONTRACT.

The successful Bidder shall, within fifteen (15) days after receiving notice of award, sign and deliver to the OWNER the Contract hereto attached together as required in these Bid Documents. Within fifteen (15) days after receiving the signed Contract from the successful Bidder, the OWNER's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

9. TIME OF COMPLETION.

The time of completion of the Work to be performed under this Contract is the essence of the Contract. The time allowed for the completion of the Work is stated in the Bid Data Form.

10. GRATUITIES AND KICKBACKS.

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

11. FISCAL YEAR.

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

## CONTRACT AGREEMENT

THIS AGREEMENT made and entered into by and between **[SUCCESSFUL BIDDER]**, hereinafter called the Contractor, and the **CITY OF GRAND ISLAND, NEBRASKA**, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published for *PGS TURBINE OVERHAUL-FIELD MACHINING 2023*; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the aforesaid Contractor to be the lowest responsive and responsible bidder, and has duly awarded to said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself, himself/herself, or themselves, and its, his/her, or their successors, as follows:

ARTICLE I. That the following documents shall comprise the Contract, and shall together be referred to as the "Agreement" or the "Contract Documents";

1. This Contract Agreement.
2. City of Grand Island's Specification for this project.
3. **[NAME OF SUCCESSFUL BIDDER]** bid signed and dated **[DATE OF BID]**.

In the event of any conflict between the terms of the Contract Documents, the provisions of the document first listed shall prevail.

ARTICLE II. That the Contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the Contract documents as listed in the attached General Specifications, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this Contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE III. That the City shall pay to the Contractor for the performance of the work embraced in this Contract and the Contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the Contract) of **[DOLLAR AMOUNT] (\$00.00)** for all services, materials, and work covered by and included in the Contract award and designated in the foregoing Article II; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

The total cost of the Contract includes:

Materials	\$ .00
Labor	\$ .00
Applicable Sales Tax	<u>\$ .00</u>
Total	\$ .00

Contractor Tax Option \_\_\_\_\_

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IV. The Contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the Contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the Contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The Contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the Contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of the PGSTURBINE OVERHAUL-FIELD MACHINING 2023.

ARTICLE V. That the Contractor shall start work as soon as possible after the Contract is signed and the required bonds and insurance are approved, and that the Contractor shall deliver the equipment, tools, supplies, and materials F.O.B. Platte Generating Station, and complete the work on or before **November 4, 2023** to align with the projected outage end date.

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this Contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this Contract, the Contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis, of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations. The Contractor agrees to maintain a drug-free workplace policy and will provide a copy of the policy to the City upon request. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

ARTICLE VII. Gratuities and kickbacks: City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any



program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

**[SUCCESSFUL BIDDER]**

By \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_

**CITY OF GRAND ISLAND, NEBRASKA**

By \_\_\_\_\_ Date \_\_\_\_\_  
Mayor

Attest: \_\_\_\_\_  
City Clerk

The Contract is in due form according to law and hereby approved.

\_\_\_\_\_  
Attorney for the City

\_\_\_\_\_  
Date

**DRAFT**

**REQUEST FOR BIDS - GENERAL SPECIFICATIONS**

The Bid shall be in accordance with the following and with all attached BID DATA and DETAILED SPECIFICATIONS.

All prices are to be furnished and installed FOB, Grand Island, Nebraska. **All prices shall be firm, and shall include all sales and use taxes as lawfully assessed under laws and regulations of the State of Nebraska.** \* If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Mailed bids shall include the following on the **outside** of the mailing envelope: **“PGS Turbine Overhaul-Field Machining 2023”**. All bids submitted by mail must include **an original and three copies** of the bid. The bid specification and on-line bidding forms are also available at <http://www.grand-island.com/business/bids-and-request-for-proposals/bid-calendar> under the bid opening date and “Click here for bid document link” through QuestCDN for a \$42.00 fee. If submitting through QuestCDN, **one** original document of the bid is required to be uploaded. No verbal bids will be considered. All sealed bids are due no later than Tuesday, **July 25, 2023 at 2:15 p.m. local time.** to:

Mailing Address: City Clerk  
City Hall  
P. O. Box 1968  
Grand Island, NE 68802-1968

Street Address: City Clerk  
City Hall  
100 E. First Street  
Grand Island, NE 68801

Bids will be opened at this time in the City Hall City Clerk’s Office located on 1<sup>st</sup> floor of City Hall. Any bid received after the specified date will not be considered.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Contractor shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

The equipment and materials must be new, the latest make or model, unless otherwise specified. Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment or material which does not meet the City's requirements will be returned at vendor's expense for correction. The invoice will be paid after approval at the next regularly scheduled City Council meeting and occurring after departmental approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Each bidder shall submit with the bid a certified check, a cashier's check, or bid bond payable to the City of Grand Island in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the Bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered. Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; All bids shall be valid for at least thirty (30) working days after the bid deadline for evaluation purposes.

**All bids must be on the bid form and must be signed and dated to be accepted.** If exceptions and/or clarifications are noted to the bid, those exceptions must be fully explained on a separate sheet, clearly marked, and included with the Bid. Any changes that are found made to the original bid specification, other than Owner generated Addendums, would result in your bid not being considered. Please contact Tylor Robinson at 308-385-5495 or email [trobinson@giud.com](mailto:trobinson@giud.com) for questions concerning this specification.

**PLATTE GENERATING STATION TURBINE OVERHAUL 2023  
DETAIL/TECHNICAL SPECIFICATION  
ON SITE FIELD MACHINING  
SCOPE OF WORK**

**Specification ID:** TG-3

**Description:** Field Machining & Site Portable Machine Shop

**Plant ID:** City of Grand Island NE Unit 1 – 122 MWs

**Project Location:**

City of Grand Island  
Platte Generating Station  
1035 W. Wildwood Drive  
Grand Island, NE 68801

**Outage Start Date:** : September 21, 2023

**Projected Outage End Date:** November 4, 2023

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## 1. Introduction

The component scope will include the following:

Hp/lp Turbine

LP A Turbine

Main Unit Valves

Generator

## 2. Purpose

This bid specification is to identify and communicate the valve power lapping and field machining services required for a medium steam turbine-generator inspection for the City of Grand Island NE Unit 1 for a 45-day outage (breaker-to-breaker).

## 3. Scope

The scope of work to be performed to include:

Field machining in place of (5) inlet sealing snout pipes at the seal ring locations to restore ovality within .001".

Removal and installation of (1) CV main disc seat at its outer shell location. Weld up and machine standard new seat shell fit location as required for proper shell fit

Perform power lapping of all main steam power valve seats. Utilization of existing tooling, if possible, with modifications or fabrication of new tooling as needed

Perform localized weld repair and machining to correct steam erosion on a best effort basis at LP outer hood steam glands N4/N5.

Correction of CV stem to crosshead connection either by weld repair or bushing insert to correct assembled TIR runout

Drill out broken or damaged large bolting 1" or larger associated with turbine disassembly. Weld repair and restore threads for blind bolt holes 1.5" or larger

Field machining support for other Contractors as required to drill out broken bolts under 1" in diameter, machine keys, repair bolts, etc. Includes: portable machine shop, and machinists on the same shift arrangement as the OCC Contractor, and access to off-site shop(s) for larger components.

Lathe  
Milling machine  
Lamina drill  
Mag base drill  
Grinder  
Boring bars  
Welding machines

## 4. Bidders

Bidders are to quote field machining (5) inlet sealing snout pipes and removal and installation of (1) CV main disc seat as firm fixed prices. All other work shall be quoted on a T&M basis and include all supervision, labor, subcontracts, materials (unless furnished by the City of grand Island), tools, and equipment necessary to perform the work per the bid specification.

## 5. Definitions

**Bidder:** The entity submitting a proposal to perform the scope of work in accordance with this specification.

**Contractor:** The person, partnership, or corporation contracting for the performance of the work.

**Owner:** City of Grand Island

**Purchaser:** The appropriate Supply Chain contact identified in the RFP document.

**SPOC:** City of Grand Island Site Point of Contact.

**Lock Out/Tag Out:** Practice and procedures to protect workers from the release of hazardous energy.

**Change Request:** A formal proposal for an alteration to a product or system, submitted 24 hours in advance.

**Confined Space:** A step that may require a confined space permit.

**Critical Lift:** Lift requiring rigging review and pre-job briefing with all involved.

**Special Tooling:** Originally supplied turbine generator tooling from the OEM or equivalent.

**Primavera Milestone:** Activities in the schedule that represents the most important deadlines, deliveries, startups, or drop-dead dates for the project.

**Work:** The scope of work including labor, tools, and material to be performed.

## 6. Project Timing:

Preliminary, though key, project milestone dates are defined below. Bidders should be aware that these outage dates are subject to change based on grid system operator demands.

<b>Activity</b>	<b>Responsibility</b>	<b>Target Date</b>
Release RFQ	Purchaser	7/7/23
Submit Proposals	Bidders	7/25/23
Verbal Contract Award	Purchaser	7/27/23

## 7. Name Plate Information

City of Grand Island Unit 1 is an indoor unit:

<b>OEM:</b>	General Electric
<b>Model:</b>	Lynn Medium Steam
<b>Turbine SN:</b>	179789
<b>Generator Serial Number:</b>	316X282
<b>Last HP Turbine Inspection:</b>	2017
<b>Last LP Turbine Inspection:</b>	2017
<b>Last Turbine Valve Outage</b>	2020

## 8. Job Plan – N/A

Develop a job plan to include, but not limited to, the following.

Laydown plan as described in Section 10.1

Quality Program as described in Section 12

Schedule as described in Section 14

Organization and Staffing plan as described in Section 16

## 9. Mobilization and Job Set Up



Field Machining Contractor Site Lead shall be on site for final preparation and placement of portable machine shop and associated job tooling

Complete required site-specific training, orientation, and drug testing.

Plant Orientation: Approximately 1 hour

Project Specific Orientation: **Approximately 90 minutes**, includes conference room discussion and an initial safety walk down.

The Field Machining Contractor will begin mobilization **2 days minimum, prior to their schedule start date** and will be required to include the mobilization period in the schedule requested in Section 14.

All mobilization activities are to be completed 24 hours prior to the scheduled start of their work.

Set up office & break trailers.

Set up tooling trailers or gang boxes.

Check parts inventory.

Set up break area, power rollers, parts area, tool area, hot work area set up, cleaning area, area for blast cleaning and nondestructive testing, diaphragm repair area, rotor stands, semi-trailers for large part storage, and sanitary facilities per the laydown plan.

Set up hose and cable bridges.

Set up and stage Field Machining Contractor's part storage bins and City of Grand Island equipment that is necessary for the outage.

Electrical power and wiring for offices, trailers, and equipment will be provided by the City of Grand Island

#### Turbine Access and Preparation for Disassembly

Coordinate Field Machining Contractor support needs throughout the project with designated points of contact per the Division of Responsibility, Section 13.

Scaffolding will be built, modified, and removed by City of Grand Island.

Instrumentation will be removed and installed by City of Grand Island.

Insulation will be removed and installed by City of Grand Island.

#### Workman's Protection

City of Grand Island Lock-out Tag-out (LOTO) procedure will be used as a part of this project to assure the safety of all personnel involved in the work. Once the equipment is properly shut down and secured by City of Grand Island Operations, the Field Machining Contractor will be required to walk down the systems related to this scope of work, verify the isolation of the systems affecting this scope of work, and sign on to the LOTO.

Base Scope Activities – See Appendix A

Gage (Emergent) Work Scope – See Appendix B

Pricing – See Appendix C

## **10. Interface and Requirements – N/A**

Laydown Plan:

The OCC Contractor will develop a final turbine floor lay down plan in co-operation with City of Grand Island and other groups. Overhead turbine building cranes and some turbine floor areas will be shared with other plant projects. Marked up copies of the scale drawings attached to this document shall be submitted to City of Grand Island representative.

OCC Contractor lay down plan will include locations of offices, break areas, tool storage, equipment storage, work areas, cleaning areas and turbine component laydown per floor loading requirements, overhead crane operation, and safe personnel passage.

OCC Contractor to provide all electric power requirements needed per machine voltage, amperage, and quantity with location defined by the laydown plan, two months prior to outage start.

Tools and Equipment:

Field Machining Contractor is required to provide all tools and equipment for the scope of work. Field Machining Contractor will specify as part of their bid, any turbine related specialty tools unique to this scope of work they will need to borrow from the owner as a part of the project. The City of Grand Island policy for lending of tools and equipment requires the contractor to confirm knowledge of safe and proper use of the requested tools and equipment before authorization can be provided. Contractor must obtain prior written authorization for use of these tools or equipment prior to their use.

A list of all special tools required is to be received 6 weeks prior to start of outage.

Field Machining Contractor shall not fabricate or use any tooling without a design review by City of Grand Island.

OCC Contractor to supply two certified crane operator on each shift. One for the main turbine-generator per shift

Work Scope Clarifications

Field Machining Contractor to provide list of cribbing needed with sizes, lengths, and quantity 6 weeks prior to mobilization. City of Grand Island will provide the cribbing specified.

OCC and Field Machining Contractors to provide general housekeeping and trash removal.

OCC Contractor to provide support required to service all labor support facilities such as, but not limited to offices, tools, etc.

OCC Contractor must include labor cost to support loading and unloading trucks to ship and receive turbine parts, tools, and related materials.

Field Machining Contractor will be provided access to all facility documentation necessary to perform the project work. At no time may Field Machining Contractor provide City of Grand Island supplied drawings, proprietary information, or any other confidential information to any other Contractor on site performing work, off site performing work on behalf of Field Machining Contractor or any sub-Contractor, parts supplier(s), or any entity without City of Grand Island specific consent.

Field Machining Contractor shall not permit reverse engineering of any City of Grand Island part or component without City of Grand Island's specific consent.

Field Machining Contractor must report all damaged and/or broken parts to the shift TG Technical Director within one shift of discovery to ensure replacements are ordered in a timely manner. Contractor to provide quantity needed and associated component for ordering purposes. The Technical Directors and TG Project Manager will maintain a running replacement parts list for the project with expected due dates to support assembly.

OCC Contractor to include all destructive removal of nuts as required to disassemble unit as base scope. Destructive removal of bolting will be by Field Machining Contractor.

## Progress Reporting & Meetings

City of Grand Island TG Deck Manager and Field Machining Contractor Superintendent must perform daily shift performance meetings with the City of Grand Island representatives to provide verbal and written status of work performed each shift. Daily report shall include:

TGTS Technical Director will provide Field Machining Contractor Superintendent and City of Grand Island a Shift Work List prior to the start of work to address schedule issues. Contractor Superintendent will supplement with support work list as needed.

LOTO Requests will be submitted by Field Machining Contractor Superintendent at the start of each shift at a minimum.

Support needs for scaffold, Insulation, electricians, technicians, and operational needs, etc. will be coordinated between the TG Deck Project Manager and Field Machining Contractor Superintendent.

Anticipated deliveries and items leaving the plant will be coordinated between the Field Machining Contractor Superintendent and TG Deck Project Manager.

Tracking and reporting current or anticipated problems likely to affect schedule will be performed by TG Deck Project Manager with input from Field Machining Contractor Superintendent.

Track, record, and report all job-related illness or injuries to City of Grand Island, by Field Machining Contractor and TG Deck Project Manager.

Total cost updates of the following by 13:00 daily by the Field Machining Contractor Superintendent:

- 10.1.1.1.1. Base scope
- 10.1.1.1.2. All approved extra work
- 10.1.1.1.3. Daily time sheets.

Weekly reports from TG Deck Project Manager, with input from Field Machining Contractor Superintendent, shall include:

Master milestone status updates

Actuals vs Baseline

Critical Path

Plan and lead a 3 day look ahead meeting to include at minimum;

Critical path activities

Schedule impact risks.

Shop inspection and repair expectations.

7-day look ahead

24-hour window for lifts

#### Meetings

TG Deck Project Manager and Field Machining Contractor to attend up to 4 pre-outage planning and scheduling meetings at the site.

- 10.1.1.1.4. Bidder Meeting On-site: TBD

10.1.1.1.5. Final Schedule Review Meeting (Zoom Conference) TBD

10.1.1.1.6. Safety Meeting On-Site: ~ TBD

TG Deck Project Manager & Field Machining Contractor Superintendent are to attend daily progress and work coordination meetings as required.

TGTS Technical Director is to submit a final report to and approved by City of Grand Island.

TGTS Technical Director to provide a detailed listing of all parts that were removed during the disassembly and reassembly process. Part numbers, descriptions, quantity, and serial numbers shall be recorded where appropriate.

TGTS Technical Director is to provide a detailed account of all observations and recommendations made, implemented, or deferred. All recommendations for future outages shall include part numbers, photos, drawings, and as left conditions.

TGTS Technical Director will provide final reports shall be received within 30 days after leaving site. City of Grand Island reserves the right to retain 10% of payment to TGTS, until a final outage report has been received and approved by City of Grand Island.

## 11. Environmental Health and Safety

### General Requirements

Field Machining Contractor must provide training and certification records upon request from the City of Grand Island for all employees on site.

Field Machining Contractor to provide certifications and training records of employees for any equipment operated on site.

OCC Contractor to provide certifications and training records of employees who are to operate the overhead crane.

Field Machining Contractor Superintendent shall provide a daily head count of all personnel on site for their company and subcontracted Contractors. This list will be given to the City of Grand Island onsite representative.

Field Machining Contractor Superintendent shall provide weekly safety statistics to the City of Grand Island that includes:

Man Hours

Near Miss

First Aids

Recordable

Lost Work

Any safety related incidents or injuries must be reported to the City of Grand Island representative immediately. The Field Machining Contractor's Superintendent must participate in and provide a written investigative report of the incident to the City of Grand Island within 24 hours that an incident or injury is discovered. The City of Grand Island will provide an example of acceptable incident report content.

Field Machining Contractor safety interface requirements during the outage:

Daily safety meetings: The Field Machining Contractor Site Safety Representative, or Safety Lead, will participate in a daily safety meeting at the start of the shift, with City of Grand Island project owners and Plant Management Team.

Weekly safety meetings: The Field Machining Contractor's Site Safety Representative, or Safety Lead, will participate in a weekly safety update to discuss outage related safety statistics and trends.

City of Grand Island Procedures

OCC Contractor shall comply with applicable City of Grand Island Procedures:

Cranes, Hoists, and Lifting Equipment – Procedure G4-63 Rev.1

OCC Contractor to provide critical lift plans for outer shell, inner shells, rotor, any dual crane evolution, or transporting a load over an operating unit during mobilization, for review and approval.

Other critical lift items will be identified during planning.

Additionally, a limit of 16 consecutive hours can be worked in a 24 consecutive. Employees who work over 16 hours in a 24-hour period must take 8 hours of rest time before returning to work. This 8-hour rest period will reset the 24-hour clock.

Field Machining Contractor Safety – Procedure G4-06, Rev.0, Attachment 5:

The following information sets forth the minimum safety requirements City of Grand Island expects from Field Machining Contractors (including their subcontracted Contractors) in the performance of their operations. Each Contractor shall be responsible for ensuring that both Field Machining Contractor and subcontracted Contractor personnel comply with all applicable requirements. This document does not, however, address every conceivable practice or procedure that could affect safety at City of Grand Island facilities and locations.

It is the responsibility of each Contractor to implement and enforce any additional safety practices or procedures that may be necessary for the safe performance of operations by Field Machining Contractor and subcontracted Contractor personnel. City of Grand Island reserves the right to inspect and deny access or use of any equipment or substance brought on site.

#### Pre-Job Meeting

Complete understanding of the health and safety requirements of the job is critical to the overall success of the project. After awarding of bids, Field Machining Contractors will be required to attend a pre-job meeting to discuss Contractor Safety Requirements and job site safety/hazard information.

#### Reporting for Work

All Contractor personnel shall report to their appropriate supervisor upon arrival at a City of Grand Island work location. Contractor Management shall ensure that Contractor personnel are given safety orientations for familiarization with potential job site hazards and emergency procedures.

#### Accident, Injury, And Illness Reporting Procedures

All work-related accidents, injuries, and illnesses shall be reported immediately or as soon as is safely possible to the appropriate City of Grand Island representative. It is the responsibility of the Contractor's designated person-in-charge to ensure that documented reports for all accidents or serious near miss situations on City of Grand Island property involving personnel injury or illness, fire and/or explosions, property damage, hazardous material spills, and vehicles, if involving another party, are delivered to the appropriate City of Grand Island representative. The Contractor is also responsible to report Contractor's incidents to all applicable federal, state, and local governmental bodies and agencies having jurisdiction, as required.

#### Field Machining Contractor Responsibilities

- 11.1.1.1.1. For projects involving 25 or more Field Machining Contractor and subcontracted Contractor workers onsite, the Field Machining Contractor shall designate or provide a full-time "Site Safety Representative" to enforce City of Grand Island and Contractor safety requirements. For contracts involving less than 25 workers onsite, the Field Machining Contractor shall designate one onsite individual as the person responsible for supervision of Contractor safety.

- 11.1.1.1.2. Field Machining Contractor is to ensure that all Contractor personnel, including Field Machining Contractor's subcontracted Contractors, are qualified and trained to perform contracted services, i.e., DOT Operator Qualification, OSHA Power Generation, Transmission and Distribution Standard, Confined Space Entry, Respirator Protection, etc.
- 11.1.1.1.3. Field Machining Contractor is to provide its personnel with proper and well-maintained equipment and tools necessary for the job being performed, unless otherwise specified by contract language. The use of City of Grand Island equipment and tools is strictly prohibited, unless expressly permitted by City of Grand Island Facility Management.
- 11.1.1.1.4. Contractor is to adhere to all applicable federal, state, and local regulations pertaining to the services contracted.
- 11.1.1.1.5. Contractor is responsible for ensuring that all operations are conducted in a safe manner, and for promptly correcting and reporting to City of Grand Island and to Contractor's and subcontracted Contractor's employees all known or suspected hazards or unsafe conditions.
- 11.1.1.1.6. Contractor is to instruct its personnel to report any known or suspected hazards or unsafe conditions to the immediate supervisor. Contractor shall immediately notify the appropriate City of Grand Island representative if known or suspected hazards or unsafe conditions involve City of Grand Island equipment/personnel.
- 11.1.1.1.7. OCC and Field Machining Contractors are to ensure the work area is maintained in a clean and orderly fashion.
- 11.1.1.1.8. Field Machining Contractor is responsible for supplying its personnel with all necessary personal protective equipment and other safety equipment, unless otherwise specified by contract language.
- 11.1.1.1.9. Field Machining Contractor is responsible for enforcing City of Grand Island safe work policies, practices, and procedures, in order to provide a safe working environment.
- 11.1.1.1.10. Field Machining Contractor personnel violating any City of Grand Island safety policy, practice, or procedure or applicable governmental regulation is subject to immediate removal by City of Grand Island from the City of Grand Island property.

Illegal Drugs, Unauthorized Material, Search and Screening

- 11.1.1.1.11. No illegal drugs, intoxicating beverages, unauthorized dangerous materials, firearms, or weapons allowed on this property.



- 11.1.1.1.12. Persons possessing or under the influence of drugs, chemical substances or alcohol are not allowed on this property. Violators are subject to removal and/or discharge.
- 11.1.1.1.13. All persons on City of Grand Island property are subject to search or drug and alcohol screening. Vehicles and other personal effects are also subject to search. Contractors are responsible for insuring they provide a drug free workforce and shall provide information as to their drug testing procedure. OCC Contractor employees on a City of Grand Island site may be part of a site random testing program where required by local procedures.

#### Personal Protective Equipment

- 11.1.1.1.14. This section lists general personal protective equipment requirements for Contractors working at City of Grand Island facilities and locations. Additional personal protective equipment or other special items may be specified by City of Grand Island facility requirements.

#### Head Protection

- 11.1.1.1.15. A non-conductive hard hat that meets the requirements of ANSI Z89.1 (Type 1, Class E) shall be worn in all work areas when a potential hazard of head injury exists or can be anticipated, or when required by City of Grand Island facility management.

#### Foot Protection

- 11.1.1.1.16. Safety toe shoes or boots in good condition and appropriate to the work being performed shall be worn in work areas designated by City of Grand Island facility management. Footwear is to meet ANSI Z41.1 requirement.

#### Eye/Face Protection

- 11.1.1.1.17. Eye protection shall be worn in all work areas when known or potential eye or face injury hazard exists or can be anticipated, or when required by City of Grand Island Management. Minimum protective eyewear shall be clean safety glasses. City of Grand Island facility management will inform Contractor of side shield requirements. All eye / face protection shall meet the requirements of ANSI Z87.1.
- 11.1.1.1.18. Face shields must be worn over, protective eyewear for work that involves a potential for corrosive / caustic chemical splash to the face, or when required by City of Grand Island management.
- 11.1.1.1.19. Hearing Protection

- 11.1.1.1.20. Hearing protection devices that meet the standards of OSHA 1910.95 shall be worn in all posted high noise areas, or when required by City of Grand Island Management. (Hearing protection is required in all known or suspected areas where noise levels exceed 85 dB).

#### Work Clothing

- 11.1.1.1.21. The minimum clothing suitable for work at the facility or job location will be determined and communicated by City of Grand Island facility management.
- 11.1.1.1.22. Protective clothing shall be worn when handling hazardous materials or chemicals, when specified by the applicable Safety Data Sheet (SDS), or when required by City of Grand Island Management. Protective clothing that becomes contaminated with hazardous materials or chemicals must be decontaminated at the end of the work shift and/or disposed of properly.
- 11.1.1.1.23. Fire Retardant Clothing (FRC) made of Nomex or other approved fire-retardant material shall be worn as an outer garment in all "designated FRC areas" or when required by City of Grand Island facility management.
- 11.1.1.1.24. Contractor personnel involved in spray painting, coating, or abrasive blasting operations shall wear an outer garment of disposable Tyvek or similar material to prevent contamination of personal clothing or FRC worn underneath.
- 11.1.1.1.25. Jewelry or loose clothing that may become entangled in tools or equipment, must be secured. Jewelry that may contact energized electrical equipment, must be made non-conductive by removal or covered with PPE.

#### Hand Protection

- 11.1.1.1.26. Protective gloves shall be worn where there is a risk of exposure to high temperatures, electricity, sharp edges, chemicals, or any other conditions or materials that may cause injury to the hands, or when required by City of Grand Island Management.

#### Fall Protection

- 11.1.1.1.27. All work performed 4' above ground level, or where a fall hazard of 4' exists, will be conducted in accordance with the applicable requirements of OSHA 1926 Subpart M - Fall Protection and City of Grand Island requirements.

- 11.1.1.1.28. Work performed from ladders will be minimized whenever possible. Scaffolding, boson chairs, crane-operated personnel baskets, or bucket trucks shall be used to perform work at elevated locations. Crane-operated personnel baskets are not recommended for use; but if such apparatus must be used, Contractor shall strictly conform to all requirements of OSHA 1926.550 (g).
- 11.1.1.1.29. All ladders must conform to OSHA requirements. Makeshift ladders are not permissible. Ladders must be properly secured. Stepladders shall not be used as straight or extension ladders. Non-conductive ladders must be used around electrical conduit or energized equipment. Personnel working from ladders will not overextend their reach. PERSONNEL SHALL MOVE LADDERS TO PROVIDE PROPER ACCESS.
- 11.1.1.1.30. Scaffolding must meet the requirements of OSHA 1910.28 - Safety Requirements for Scaffolding and OSHA 1926.451 - Scaffolding must be inspected/approved and tagged by Contractor personnel, who are a competent person under OSHA's scaffolding requirements, certifying compliance before its use.

#### Respiratory Protection Equipment

- 11.1.1.1.31. Respiratory protection equipment shall be utilized whenever work activities involve potential exposure to atmospheres that are oxygen-deficient or contain air contaminants that may be harmful to health, or when required by City of Grand Island Management.
- 11.1.1.1.32. The Contractor's respiratory protection equipment shall be selected, inspected, maintained, and used in accordance with OSHA 1910.134 - Respiratory Protection, and City of Grand Island requirements.
- 11.1.1.1.33. The Contractor shall ensure that personnel using respiratory protection equipment have received appropriate medical clearance, fit testing, and respiratory protection training. Documentation of the above shall be available upon request.
- 11.1.1.1.34. Breathing air used in supplied air or self-contained respiratory protection equipment must meet or exceed the standards of Grade "D" air, as specified in OSHA 1910.134. A laboratory analysis or manufacturer's certificate verifying Grade "D" breathing air shall be available for inspection upon request.

- 11.1.1.1.35. Compressors used to provide breathing air must be equipped with a high temperature alarm, carbon monoxide (CO) monitor / alarm, and air cleaning / filtering devices as needed to produce Grade "D" quality breathing air. A laboratory analysis verifying Grade "D" output air for breathing shall be available for inspection upon request.

#### Personal Flotation Device (PFD)

- 11.1.1.1.36. Contractors working or traveling over water shall have access to U. S. Coast Guard approved personal flotation device (PFD).
- 11.1.1.1.37. The PFD must be worn when riding anywhere other than inside the cabin of a boat. PFD must be worn at all time, when riding or working in a small, open boats.
- 11.1.1.1.38. When working within a properly guard railed platform, a PFD need not be worn. If the work is being done outside of a guardrail, or if there is no guardrail, each person must wear a PFD.
- 11.1.1.1.39. A PFD shall be worn by any person involved in transfers between vessels and structures and while working on barge or boat decks.

#### Other Personal Protective Equipment

- 11.1.1.1.40. Special situations may require the use of additional personal protective equipment. Each Contractor shall be solely responsible for recognizing when such equipment is required and shall be responsible to provide such equipment. Additional personal protective equipment requirements may also be specified by City of Grand Island Facility Management

#### Safe Work Practices

- 11.1.1.1.41. Safety Meetings
- 11.1.1.1.42. Prior to beginning an unfamiliar, hazardous, or major project, Contractor personnel must conduct a documented safety meeting to discuss safe procedures and work practices.
- 11.1.1.1.43. Contractors shall conduct daily "Tool-Box" safety meetings to discuss the day's work assignments and proper safety precautions.

#### Smoking

- 11.1.1.1.44. Smoking is absolutely prohibited at all facilities except in designated smoking areas. Daily and weekly safety walkdowns to include monitoring smoking.

#### Signs

- 11.1.1.1.45. Contractor personnel shall be familiar with and comply with all signs posted throughout City of Grand Island facilities.

#### Lockout/Tagout

- 11.1.1.1.46. All Contractors are required to be familiar with and comply with City of Grand Island site-specific lockout/tagout procedures while working on powered equipment, when performing confined space entry operations, or when engaged in other work activities where the control of hazardous energy is necessary to ensure personnel safety.

#### Permit to Work Systems

- 11.1.1.1.47. All Contractors must be familiar with and comply with all permit requirements when working at City of Grand Island facilities. Permits, if required, must be issued prior to the work beginning, and may only be issued by City of Grand Island personnel.

#### Confined Space Entry

- 11.1.1.1.48. All Contractors performing work involving "Confined Space Entry" must comply with requirements in OSHA 29 CFR and shall be familiar with and comply with City of Grand Island confined space entry permit procedures.

#### Hot Work

- 11.1.1.1.49. All Contractors conducting "Hot Work" (welding, cutting, etc.) must comply with requirements in OSHA 29 CFR and shall be familiar with and comply with City of Grand Island hot work permit procedures.

#### Hazard Communication

- 11.1.1.1.50. All Contractor personnel shall be familiar with and comply with City of Grand Island site-specific Hazard Communication Program requirements and procedures.
- 11.1.1.1.51. City of Grand Island will provide to Contractor, upon request, an appropriate Safety Data Sheet (SDS) for hazardous chemicals that the Contractor could come, in contact with.
- 11.1.1.1.52. Contractor shall maintain onsite an appropriate SDS for any hazardous material or chemical that Contractor brings or uses onsite. Contractor is to submit an SDS, to the City of Grand Island Representative, for every hazardous material brought on site. Such hazardous materials or chemicals will be properly stored and labeled in accordance with safety and environmental regulations.

### Potential Exposure to Toxic Materials

- 11.1.1.1.53. All work involving the potential exposure to toxic materials (Hydrogen Sulfide, arsenic, lead, benzene, etc.) must be conducted in accordance with applicable state or federal regulations, and City of Grand Island requirements.
- 11.1.1.1.54. Depending upon the nature of the work to be performed and whether the presence of toxic materials is anticipated. Training, respiratory protection equipment, gas detection / alarm equipment, and other protective measures may be required.

### Excavation

- 11.1.1.1.55. All excavation related work must be conducted in accordance with OSHA 1926 Subpart P - Excavations, and City of Grand Island requirements.

### Fire Prevention and Control

- 11.1.1.1.56. Smoking is permitted only in designated smoking areas approved by the City of Grand Island Facility Management.
- 11.1.1.1.57. Welding and cutting is prohibited outside of designated safe welding areas unless controlled by a hot work permit. A fire watch is required for all hot work, unless the work takes place inside a designated safe welding area.
- 11.1.1.1.58. Contractor shall provide all portable fire extinguishers for all Contractor engaged hot work, open flames, or use of flammable gas / liquids presenting a risk of fire. Personnel designated to utilize fire extinguishers must be familiar with their proper use and limitations. Fire extinguishers must be maintained in good working order and inspected in accordance with state or federal regulations.
- 11.1.1.1.59. Good housekeeping is an important part of fire prevention and must be strictly enforced. Oily rags, debris, trash, and other unnecessary material must be picked up and disposed of regularly. Trash receptacles must be available in the area and emptied on a regular basis.
- 11.1.1.1.60. Minor spills or leaks of flammable / combustible liquids must be cleaned up promptly, and the source of spill / leak repaired.
- 11.1.1.1.61. Bulk transporters or tank trucks loading or unloading flammable liquids must utilize grounding / bonding equipment to prevent ignition of flammable vapors due to static electrical discharge.

- 11.1.1.1.62. The potential for static electrical discharge must be considered for other flammable liquid transfers, such as filling drums, buckets, or other small containers. Use of bonding equipment and other precautions to prevent ignition of flammable vapors will be utilized whenever appropriate.
- 11.1.1.1.63. Gasoline is a fuel and must not be used as a cleaning agent. Gasoline and other flammable liquids must not be stored in glass or plastic containers. U.L./F.M. approved metal safety cans are recommended.
- 11.1.1.1.64. Portable tanks and drums for flammable liquid storage must be:
- 11.1.1.1.65. Constructed of metal unless the liquid is corrosive to metal.
- 11.1.1.1.66. Adequately vented with flame arresting capability whenever possible.
- 11.1.1.1.67. Equipped with self-closing spouts to prevent spillage.
- 11.1.1.1.68. Located as far as feasibly possible from electrical and mechanical equipment or other ignition sources.

#### Vehicle Operations

- 11.1.1.1.69. Contractors must operate vehicles in full compliance with all applicable federal, state, and local regulations.
- 11.1.1.1.70. No motor-powered vehicle will be left running if the operator leaves the operating position, except for using power-take-off equipment.
- 11.1.1.1.71. STAY WITHIN POSTED SPEED LIMITS. On rights-of-way or other roadways which do not have posted speed limits, SLOW DOWN and be alert for other vehicles, pedestrians, livestock, wildlife, etc.
- 11.1.1.1.72. Seat belt use is mandatory for all persons riding vehicles that are equipped with seat belts.
- 11.1.1.1.73. Always DRIVE DEFENSIVELY
- 11.1.1.1.74. All Contractor vehicle accidents that occur on City of Grand Island property must be reported promptly to the City of Grand Island Facility Management.

#### Emergency Drills

- 11.1.1.1.75. Contractor personnel must become familiar with their prescribed assignments in an emergency and participate in drills conducted on City of Grand Island facilities, when requested.

#### Entry into Water

- 11.1.1.1.76. Non-rescue entry into the water from a City of Grand Island facility is strictly prohibited, unless specifically authorized by the City of Grand Island in order to perform services (i.e., diving).

#### Equipment Operator Qualifications

- 11.1.1.1.77. Any Contractor employee required to operate a crane, forklift, or other heavy equipment, shall be qualified to operate the equipment, and comply with applicable OSHA and City of Grand Island operating procedures. All operator qualifications are subject to approval by the City of Grand Island.
- 11.1.1.1.78. No motor-powered vehicle will be left running if the operator leaves the operating position, unless operating power-take-off (PTO) driven equipment.

#### Protection of Openings

- 11.1.1.1.79. All hole and floor openings will be constantly attended while opened and not barricaded.
- 11.1.1.1.80. All hole and floor opening barricades must be constructed to prevent accidental entry.

#### Temporary Structures

- 11.1.1.1.81. Trailers and temporary buildings will be secured by anchors. If electrical power is used, the building must be grounded.

#### Ground Fault Protection

- 11.1.1.1.82. The Contractor shall establish and maintain electrical ground fault protection by using either Ground Fault Circuit Interrupters or implementing an Assured Electrical Equipment Grounding Conductor Program. The program will cover all cord sets and receptacles that are not a part of the permanent wiring of a building or structure. Including equipment connected by cord and plug that are available for use or are used by Contractor employees. This program will comply with the minimum standards set forth in 29 CFR Part 1926.404b.

#### Training

- 11.1.1.1.83. The Contractor is responsible for conducting and documenting all Contractor employee (including Contractor's subcontracted Contractors) training required by federal, state, or local safety and health regulations. Such documentation may be subject to review by the City of Grand Island at any time prior to, during or after completion of any project or work.



## Process Safety Management

- 11.1.1.1.84. Contractors working at City of Grand Island facilities covered by OSHA 1910.119 - Process Safety Management and whose work involves plant process areas, product storage areas, or other "covered processes" (as defined by OSHA) must:
- 11.1.1.1.85. Establish procedures to properly conduct Contractor performed maintenance activities that affect process safety.
- 11.1.1.1.86. Contractor must document that each Contractor employee has been trained in the work practices necessary to safely perform his/her job.
- 11.1.1.1.87. Contractor must document that each Contractor employee has been instructed in the known and potential fire, explosion, or toxic release hazards related to his/her job and the process.
- 11.1.1.1.88. Document that each Contractor employee has been instructed in the applicable provisions of the facility Emergency Action Plan.
- 11.1.1.1.89. Assure that each Contractor employee follows all applicable safety rules of the facility or work location.
- 11.1.1.1.90. Advise City of Grand Island of any unique hazards presented by the Contractor's work, and any hazards identified by the Contractor or its employees during the work.
- 11.1.1.1.91. Documentation required above must include the name of each Contractor employee, the date of training, and the means utilized to verify that the employee understood the training.

## 12. Quality Program

### City of Grand Island Quality Program

Activities to be verified during the execution of the outage to assure no activities are left incomplete.

A definition of record keeping required that shall be included in the final report submitted by the Field Machining Contractor at the end of the project. Records will include:

**Data Point:** Measurement data to be clearly documented on data sheets for "as found" or "as left" conditions, complete with positive identification of the component being measured, date taken, and name of person taking the data. A copy of the Data Point data sheets will be made available to City of Grand Island TG Deck Manager and/or TGTS TG Technical Director the day the data is taken and included in the final report.

**Photo Point:** A step requiring a photo to be included in the final report. The Photo must include written identification of the contents of the photograph.

**Witness Point:** A step where the City of Grand Island or City of Grand Island designee will be consulted for observation of the condition of a component or work practice.

**Hold Point:** A mandatory verification point that work cannot proceed without approval by City of Grand Island TG Deck Manager or City of Grand Island designee.

**Close Out Form:** Document requiring completion and submittal of a final close-out verification of any equipment.

#### Field Machining Contractor Quality Program

Field Machining Contractor will provide a detailed definition and presentation of their Quality Program that integrates the City of Grand Island QA/QC Document on this project.

#### Foreign Material Exclusion (FME) – N/A

Contractor shall provide an FME plan, FME barriers and supporting materials. All openings are to be covered and a log maintained to account for all covers.

Contractor is responsible for close out inspections of all oil and steam lines and any foreign object removal associated with the OCC Contractor's work. City of Grand Island or their designee will witness all final close-out inspections.

#### Frequency of Reporting

All records, data points, photo points, witness points, hold points, close out forms, and other documentation shall be supplied, by the Field Machining Contractor, to the TGTS Technical Director and City of Grand Island in real time throughout the project. These real-time quality records will include both initial and final quality records. In no circumstance shall this time period, of reporting, exceed the shift in which the quality item occurred.

All quality forms shall be included in a packet supplied to the City of Grand Island prior to the Contractor demobilizing from site.

All quality forms shall be included in the final report.

## 13. Division of Responsibility

#### City of Grand Island Pre-outage Responsibilities

Unless otherwise noted, Field Machining Contractor shall notify City of Grand Island TG Deck Manager in writing with a minimum of 5 business days advanced notice for all support services, as defined by Table in Section 13.2 required to support the Contractors work scope.

**Example:** Mobilization needs for crane support to set tools and offices in place prior to the outage, and for electricians to connect power and internet services.

#### City of Grand Island Execution Responsibilities

Field Machining Contractor shall notify City of Grand Island TG Deck Manager in writing with a minimum of 36 hours advanced notice for all support services, as defined by in table below, required to support the Contractors work scope.

**Example:** Instrumentation disconnect and reconnect will be performed by City of Grand Island I&C upon request with 24 hours written notice.

Type	Item No.	Description	Bidder	City of Grand Island	Comment
Services & Utilities	1	Electrical Connections & Disconnections		X	
	2	Instrumentation Connections & Disconnections		X	
	3	Insulation Removal, Installation, & Materials		X	
	4	Scaffolding Erection, Removal, & Equipment		X	Includes carpenter support for boxes, pallets, etc.
	5	Fire System Disassembly & Restoration		X	
	6	Welding, Certification, Procedures, Process Control, & Equipment		X	
	7	Heat Treating, Procedures, Process Control, & Equipment	X		
	8	Bolt Heating & Equipment	N/A		
	9	Tops-On Laser Alignment & Equipment	N/A		
	10	Heavy Rigging, Certification, Procedures, & Equipment		X	Bidder to support
	11	Trucking & Equipment		X	Bidder to support
	12	Dust blasting & Equipment	N/A		
	13	NDE, Certification, Procedures, & Equipment		X	
	14	Oil Circulation & Equipment		X	
	15	Support labor for Oil Circulation	N/A		
	16	EH Flush & Equipment		X	
	17	Support for EH Flush	N/A		
	18	Asbestos Abatement, Monitoring, Process Control, & Equipment		X	
	19	Lead Abatement, Monitoring, Process Control, & Equipment		X	
	20	Scrap Removal & Equipment		X	Bidder to support
	21	Certified Crane (Overhead/Pendant) & Forklift Equipment Operator		X	Can be Millwright with certification paperwork
	22	Machine Shop - Off-site	X		City of Grand Island to wire

	<b>23</b>	Machine Shop & Equipment - On-site	X		City of Grand Island to wire
	<b>24</b>	Telephone Hook Ups		X	City of Grand Island to wire
	<b>25</b>	Internet Access		X	City of Grand Island to wire
	<b>26</b>	Fire Water		X	
	<b>27</b>	Necessary electrical power including 120 and 240 single phase and 240 and 480 three phase up to 200 amps to be identified on successful bidder's lay down plan by date specified above.		X	Bidder to notify City of Grand Island before outage of additional requirements
	<b>28</b>	Service Water & Drain Access		X	Bidder to support
	<b>29</b>	First Aid - On-site	*	*	
	<b>30</b>	Sanitary Facilities (Toilet & Hand Wash)		X	City of Grand Island will provide facilities on site and contactor will provide labor to unload, load, and any movements required for servicing of the facilities during the outage.
	<b>31</b>	Trash Removal & Containers		X	Bidder to support
	<b>32</b>	Disposal of Hazardous Materials		X	Bidder to support
	<b>33</b>	Qualified Craft Labor	X		
	<b>34</b>	Craft Labor Supervision	X		
	<b>35</b>	Clerical & Administrative Support	X		
	<b>36</b>	Scheduling & Planning		X	To be in Primavera P6.xer format
	<b>37</b>	TG Project Manager		X	GE TE & PM Background
	<b>38</b>	TG Technical Director - Day Shift		X	GE TE Background
	<b>39</b>	TG Technical Director - Night Shift		X	GE Generator Specialist & TE Background
	<b>40</b>	Balance Engineer and Start-up Support		X	
<b>Equipment</b>	<b>41</b>	Office Trailers		X	City of Grand Island to wire
	<b>42</b>	Break Trailers		X	City of Grand Island to wire
	<b>43</b>	Fork & Man Lifts		*	

	<b>44</b>	OEM Supplied Special Tooling & Rigging		<b>X</b>	Bidder to support
	<b>45</b>	Tooling & Rigging for Work Crews Defined by Work Scope		<b>X</b>	
	<b>46</b>	Overhead Crane & Inspection		<b>X</b>	Bidder to support
	<b>47</b>	Expendable Material Defined by Work Scope		<b>X</b>	Bidder to support
	<b>48</b>	Power Rollers Defined by Work Scope	<b>N/A</b>		
	<b>49</b>	Timbers, Skids, & Pallets		<b>X</b>	Bidder to support
	<b>50</b>	Floor Protection		<b>X</b>	Bidder to support
	<b>51</b>	Renewal Parts & Materials		<b>X</b>	Bidder to support
	<b>52</b>	Necessary oxygen, acetylene gas, hydrogen, carbon dioxide, and argon		<b>X</b>	Bidder to support
	<b>53</b>	Valve Lapping Tools		<b>X</b>	Specialty Contractor
	<b>54</b>	Valve Try Bars		<b>X</b>	
	<b>55</b>	Bearing Mandrels		<b>X</b>	
<b>Duties</b>	<b>56</b>	Review the scope of work and schedule	<b>X</b>		
	<b>57</b>	Develop scope specific work packages (remain bidder's property)	<b>X</b>		
	<b>58</b>	Bidder shall inventory special tooling and may use such tooling owned by the plant with permission. All other needs will be fulfilled by bidder.	<b>X</b>		
	<b>59</b>	Bidder shall provide City of Grand Island with list of joint compounds, thread compounds, sealing compounds, lubrication products, cleaning products, etc. with SDS sheets.	<b>X</b>		
	<b>60</b>	Lay down space as necessary		<b>X</b>	Bidder to support
	<b>61</b>	Receive and inventory parts on turbine floor during site mobilization of the supplier	<b>N/A</b>		
	<b>62</b>	Schedule updates input to City of Grand Island Project Manager	<b>X</b>		
	<b>63</b>	Load out and receive turbine components onto trucks	<b>X</b>		
	<b>64</b>	Cutting of new gaskets.	<b>N/A</b>		

65	Remove broken bolting up to and including 1" OD	X		Larger bolting will be by others
66	Final Report	X		Due within 30 days of demobilization

\* Indicates outage specific responsibilities

## 14. Risk Management – N/A

### City of Grand Island Risk Mitigation Plan

The Contractor will participate in a review of the City of Grand Island Project Risk Matrix which will identify known areas of concern related to this scope of work. The Contractor shall support the Risk Mitigation Plan

Make recommendations of any additional risks related to the scope of work that are not already identified and include mitigation plans to avoid the risk or resolve the risk if it occurs.

Include risks identified as "High Risks" in the P6 schedule as defined in Schedule Section 14.

Provide updates on the status of these High-Risk Activities during the execution of the outage as each one is discovered and/or mitigated.

City of Grand Island will request Gage Pricing for potential work scopes identified by the Risk Mitigation Plans in preparation for the possibility they may be needed.

## 15. Organization Chart & Staffing

The City of Grand Island Project Team will consist of the following:

City of Grand Island Turbine Generator Deck Manager: The TG Deck Manager is the SPOC during the execution of the overall project. This person is responsible for all day-to-day work activities, both on and off site, and allocation of overhead cranes across Contractors and plant work groups.

Turbine Generator Technical Director: The TG Technical Director is responsible for providing OEM quality technical assistance as well as alternative options with pros and cons for pricing, schedule, and risk to all people involved with the project and the final report.

The OCC Contractor shall provide an ample force of workers and supervisors with enough equipment, tools, and facilities to perform the work at the rate of progress defined by the contract and project milestones at the minimum levels listed below:

Job management

1 dayshift Superintendent

1 nightshift Supervisor

Craft labor

2 Machinist Journeymen per shift - minimum

1 Welder Journeyman/helper per shift - minimum

Onsite job support structure

Portable machine shop on the same two shifts as the OCC Contractor

Offsite job support structure

Machine shop to handle larger components

Jobsite Tooling

Lathe

Grinder

Milling machine

Lamina drill

Mag base drill

Boring bar

Work and welding tables

Identify team roles

Identify who will fill roles

Identify expectations of each role here.

Identify union or non-union labor for execution of the work

If union – Agreement?

## 16. Pricing Sheet

Base Work Scope

Bidder shall provide price quotations as defined in the Pricing Appendix located in Appendix B for the base scope of work. Pricing is firm priced and by package only, then supplemented by Gage pricing for selected potential extra work.



Appendix B for Firm Pricing Tables

Appendix C for Gage Repair T&M Daily (2 shift) Pricing Tables

Bidder shall provide T&M Rates including Markups for Consumables, Materials, Transportation, Subcontracted Contractors, etc.

Straight time rate:

Overtime rate:

Tooling extras:

Other:

#### Optional Pricing

Bidder may submit optional pricing along with their base bid for such supplemental scope as known Technical Advisories, Service bulletins, Best Industry Practices, etc.

#### Small Tools

City of Grand Island will not accept invoices for small tools needed for emergent or extra work required during this Project. Therefore, Bidders are asked to ADD their estimated cost for small tools (generally valued at \$1,200 or less) into their fixed gage pricing. Bidders should further include provision for same (e.g. + \$ .50 hr.) in their T&M rates for EMERGENT, EXTRA WORK ONLY an adder for use of Small Tools. The attached Small Tool List – although not inclusive – is an example of such tools that could be utilized for such work.

#### Extra Work

Company may, at any time, request Contractor to perform additional work outside the specific scope authorized by this Agreement ("Extra Work"). Extra Work, except in the case of an emergency, will be initiated using an Extra Work Order Form (Attachment 1) that specifies the Extra Work requested. The request for Extra Work will be made by Company and issued to Contractor by Company's buyer. Within seven (7) days of receipt of the request for Extra Work, Contractor will submit to Company's buyer, in writing, a proposal for accomplishing the Extra Work, including the cost, start and completion date. Extra Work will be authorized to be performed only upon the execution of the Extra Work Order Form by the Contractor, Company's Contract Coordinator, and Company's Contract Administrator. Compensation for Extra Work will be in accordance with the Extra Work Rates listed below. Invoices will be submitted and paid after completion of outage.

Company's Contract Coordinator may, by oral request, ask Contractor to perform Extra Work, in the event of an emergency which threatens either life or property. In that event, Contractor agrees to perform the requested Extra Work based upon the Extra Work Rates listed below. Emergency Extra Work will be confirmed in a written Extra Work Order as soon as practical.

Supervision of extra work scopes that do not change the scheduled shift arrangement or outage length will be covered by the base bid.

All extra work will be approved through a Contractor generated Extra Work Authorization (EWA) program using forms approved by City of Grand Island.

EWAs should be submitted as either fixed cost or T&M not to exceed cost basis at City of Grand Island preference, based on Contractor's T&M rates supplied in their proposal.

City of Grand Island will assign revised PO #s for any authorized EWAs.

EWAs can only be authorized by authorized City of Grand Island representatives. E-mail authorization is acceptable.

All time sheets must be submitted to be signed by the City of Grand Island representative on the shift during which work scope is performed.

A running total of costs, per authorized EWA, will be generated by the Contractor on a daily weekday basis. These reports will be available by 1:00 pm Central Time and include all charges up to the end of shift of the previous night, which in most cases will be 07:00 am Central Time of the same day.

Time and material rates shall be furnished with each proposal.

#### Proposal Expiration

This proposal shall be valid for a period of one year past the original outage start date defined on page 1 of this technical specification.

## **17. Milestone Invoicing**

The Contractor shall invoice the following short of Liquidated Damages, if incurred, as addressed in Section 15 upon meeting satisfactory completion of key execution milestone dates and coming to the calendar date.

Job Plan Provided = 10%

Mobilization complete = 10%

All site disassembly & inspections complete = 40%

Full release of unit = 30%

Final report submitted = 10%

Cancellation Structure

In the event the City of Grand Island elects to cancel the work package for convenience, after the work package has been awarded to the Contractor, at any time before the date that is 30 days prior to the Job Plan execution milestone, Contractor shall not be entitled to any compensation. After such date, termination by City of Grand Island for convenience will be governed by the City of Grand Island terms and conditions.

There will be no cancellation, escalation, or adder charges, in the event the City of Grand Island choses to move the project to start within 1 year from the defined project start date.

## **18. Warranty**

The Contractor warrants that the Services will be performed with the degree of skill and care that is required by current, good, and sound professional procedures and practices, and in conformance with generally accepted professional standards prevailing at the time the Services are performed to ensure that all Services performed are correct and appropriate.

The Contractor warrants all work under the Contract to be of good quality and free from any defective or faulty material and workmanship. Contractor agrees to guarantee all work under this Contract for a period of one (1) year from the date of Final Settlement by the Owner. If any unsatisfactory condition or damage develops within the time of this guarantee due to materials or workmanship that are defective, inferior, or not in accordance with the Contract, as reasonably determined by the Owner, then the Contractor shall, when notified by the Owner, immediately place such guaranteed Work in a condition satisfactory to the Owner. For any Work so corrected, Contractor's obligation hereunder to correct defective Work shall be reinstated for an additional one-year period, commencing with the date of acceptance of such corrected Work.

## **19. Insurance**

The Contractor shall comply with the City of Grand Island Insurance requirements.

## **20. Performance and Payment Bond**

The Contractor shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of 1 year after the date of final acceptance of the Work by the Owner. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is locates and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney -in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of their power-of-attorney as evidence of their authority to bind the Surety on the date of execution of the bond.

## **21. Reference & Experience**

Please provide resumes of key staffing personnel

(Project Manager, Site Superintendent, Safety person, General Foreman, etc.) you will employ for the Work performed.

Please provide a list of similar work or projects for other Customers

Beginning with the most recent - including Customer name, key contact, title, phone no. and email address.

## **22. Proposal format (Exceptions & Clarifications)**

Bidder must provide a proposal that includes:

An identical structure of bullet points as listed in the Technical Specification document.

Exceptions for a specific section should be included in appropriate section using the same bullet point number for easy identification.

Additional services, support, and clarifications Bidder supplies should be clearly separated from Exceptions in the specific section.

The Bidder shall state in the proposal all exceptions to spec.

If there are no exceptions, it shall be so stated in writing.

Pricing to be provided broken out into format in Appendix C for all bids.

Indicate your complete mailing address for our purchase order.

Proposed alternatives shall be identified. After award of the contract, should the Contractor desire to deviate from the specification, the Contractor shall present in writing the intended deviation and shall receive written approval from the contract manager prior to implementing the change. The Contractor is responsible for compliance with all the detailed requirements in the specification. Nothing in the specification shall relieve the Contractor of the responsibility for performing, in addition to the requirements of the specification, such tests, inspections, design checks, and other activities that the Contractor considers necessary to ensure the quality of the job. Any unapproved nonconformity with the specification shall be changed to complete conformity at the Contractor's expense.

## 23. Evaluation

All proposals submitted will be evaluated by the Owner based on price, schedule, quality, economy of operation, experience of contractor, and adherence to specification. The owner reserves the right to reject any or all bids or waive informalities and to accept whichever bid that may be in the best interest of owner, at its sole discretion. The owner reserves the right to accept portions of the bid while disregarding portions that the purchaser deems unnecessary. The purchaser reserves the right to request revisions to the estimated time and material repairs to budget for possible repairs that are unknown. All revisions to the bid will be calculated using the provided rate sheets. Bids must be received by **2:15 P.M. Tuesday, July 25, 2023.**

Bidder is solely responsible for obtaining any clarifications to this specification as may be required for the Bidder to submit an accurate and complete bid proposal.

## 24. Terms & Conditions

Provide all other proposed terms and conditions which will be in effect during the performance of the work as a separate attachment with the bid. Any exceptions the Contractor wishes to take regarding the Owners specifications and contract documents must be submitted with the bid.

Time is of the essence in the evaluation of proposals, the execution of contract documents and/or issuance of a Purchase Order for the execution of the work. Submittal of proposals that include terms and conditions unacceptable to the Owner, or that lack the information and clarity required by these specifications may be subject to rejection at the sole discretion of the Owner.

## 25. Appendix A – Base Scope Activities

HP/IP Turbine – Grind CV seat/snouts (5) in place to obtain ovality within .001". Snouts located in HPIP outer shell both halves.

HP/Ip Turbine – Remove existing CV#2 (upper half shell), prep shell fit diameter, machine new seat diameters as required, Weld nominal sized new CV seat at fit diameter if needed, and install with seal weld. NDE after final seal weld.

LPA Turbine – Perform localized weld repairs and machining either with a portable milling machine or by hand to correct steam erosion and restore joints and carrier sealing faces on a best effort basis N4/N5 outer hood location. **Assume 150 MHRS for pricing purposes.**

Bolt Hole Threads – Provide portable automatic welder for welding damaged blind bolt holes 1.5" diameter or larger. After welding, holes will be drilled and tapped to original thread size. **Assume 150 MHRS for pricing purposes.** Refer also to gage activities appendix B.

HPIP/LPA/Valves - Provide equipment and tooling for drilling out all broken and damaged bolting as a result of disassembly. **Assume 150 MHRS for pricing purposes.**

Steam Valves – Provide power lapping of all main unit steam valves to include blow down valve. Utilize plant lapping tooling and modify as needed to obtain functionality and results required. Support skim cutting of (6) CV discs & the (3) inner and (1) main stop valve disc. **Assume all discs listed will require a skim cut for pricing purposes.**

Steam Valves – Perform correction of the stem to crosshead threaded connection to restore assembled runouts. Repair methods accepted would be a weld repair & threading of existing crosshead if possible or manufacture and installation of a threaded insert in the existing crosshead. **Total of 6 assemblies**

Provide portable machine shop with machinist on 1-6-10 shift.

## 26. Appendix B – Gage Activities

Component	Subcomponent	Gage Work Scope Description
HP/IP/LPA	Joint Bolting – 1.0" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.
HP/IP/LPA	Joint Bolting – 1.5" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.
HP/IP/LPA	Joint Bolting – 2.0" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.
HP/IP/LPA	Joint Bolting – 2.5" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.
Combined Valves	Valve Seat Machining	Supply in-place boring bar and all support equipment for machining of (2) CRV main disc seats.

## **27. Appendix C – TG-3 Field Machining Pricing Tables**

**Vendor Name:**

**Vendor Contact Information:**

**Proposal Date:**

**Proposal Revision:**

Please provide breakdown prices in the tables below.

## Base Scope Pricing

### Working 1-6-10 Shift

Work Package	Scope	Component	FIRM Price
TG-3	In Place Grinding CV Seat Snouts (5) Total	Main CV's	\$ _____
TG-3	Removal & Installation of (1) New CV Seat Including Seat Fit Welding/Machining	Main CV's	\$ _____

Work Package	Scope	Component	T&M Price
TG-3	Power Lap Valve Seats	Main Steam Valves & BDV	\$ _____
TG-3	Local Weld Repairs – 150 MHRS	LP Outer Hood N4/N5	\$ _____
TG-3	Welded Bolt Hole Thread Repairs - 1.5" or Larger – 150 MHRS	HP/IP/LPA	\$ _____
TG-3	Drilling Broken Bolting – 150 MHRS	HP/IP/LPA	\$ _____
TG-3	Portable Machine Shop & Machinist	Priced for 1-6-10 shift per week	\$ _____
<b>Total:</b>			<b>\$ _____</b>



## Gage Scope Pricing

### Working 1-6-10 shift

Work Package	Work Package Title	Work Description	T&M Price
TG-3	Joint Bolting – 1.0" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.	\$ _____
TG-3	Joint Bolting – 1.5" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.	\$ _____
TG-3	Joint Bolting – 2.0" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.	\$ _____
TG-3	Joint Bolting – 2.5" diameter	Supply & install threaded insert to correct damaged joint bolting threaded hole.	\$ _____
TG-3	Valve Seat Machining	Supply in-place boring bar and all support equipment for machining of (2) CRV main disc seats.	\$ _____
<b>Total:</b>			<b>\$ _____</b>

**MINIMUM INSURANCE REQUIREMENTS**  
**CITY OF GRAND ISLAND, NEBRASKA**

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the Bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve Bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

**1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY**

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

**2. BUSINESS AUTOMOBILE LIABILITY**

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 Combined Single Limit
---------------------------------	----------------------------------

**3. COMPREHENSIVE GENERAL LIABILITY**

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

**4. UMBRELLA LIABILITY INSURANCE**

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

**5. ADDITIONAL REQUIREMENTS**

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.

## **6. CERTIFICATE OF INSURANCE**

Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the Bidder cannot have the "endeavor to" language stricken, the Bidder may elect to provide a new certificate of insurance every thirty (30) days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**

## SUMMARY OF TURBINE DESIGN FEATURES

**CUSTOMER:** Platte Generating Station, Grand Island Utilities Dept

**TURBINE NO.** 197789

**TURBINE TYPE:** Reheat Double Flow

**DRIVING:** 122,000 KVA, 13,800 V, Hydrogen Cooled-Generator, 375 V Static Exciter

**NOTE:** The following summary lists the specific design features and components of this turbine.

Front standard type: 8.1 with sliding support

### PERFORMANCE

Rating 100,000 kw

#### Steam conditions

Initial pressure 1800 psig

Initial temperature 1000/1000 FTT

Back pressure 2.5 Inches Hg Abs

#### Speed

Rated 3600 rpm

Pre-emergency 3850 rpm

Trip 4014 rpm

High-speed set point 3800 rpm

### EXTRACTION

Number of uncontrolled extractions 4

### THERMODYNAMIC DESIGN

#### Valve sizes

Packing dump 5 inches

Temperature alarm in exhaust set at 175 F

High-pressure minimum-flow alarm switch set at 125,000 lb/hr

## MECHANICAL DESIGN

Active thrust bearing: Tapered  
Orifice size 21/32 inch

Inactive thrust bearing: Tapered  
Orifice size 21/32 inch

No. 1 bearing: Elliptical  
Orifice size 1/4 inch  
Minimum bearing clearance .010 inch

No. 2 bearing: Elliptical  
Orifice size 7/16 inch  
Minimum bearing clearance .017

No. 3 bearing: Elliptical  
Orifice size 3/8 inch  
Minimum bearing clearance .016 inch

No. 4 bearing: Elliptical  
Orifice size 1/2 inch  
Minimum bearing clearance .017 inch

No. 5 bearing: Elliptical  
Orifice size 1/2 inch  
Minimum bearing clearance .017 inch

Casing drain valve: Double

Turning gear on turbine exhaust bearing

Nameplate language: English

Thermometers: Degrees Fahrenheit

Gages: English units

Accessory panels  
Control center

Provision for borescope inspection

- First stage
- Three stages in reheat casing
- L-3 stage in exhaust
- L-2 stage in exhaust
- L-1 stage in exhaust
- L stage thru manhole
- One in stop valve

Pressure tap for boiler control in stage valve shell

## MECHANICAL DESIGN (CONT'D)

### Controlled-start thermocouples

- First-stage shell inner surface
- First-stage shell outer surface
- Steam chest inner surface
- Steam chest outer surface
- Reheat bowl inner surface
- Reheat bowl outer surface

Relief diaphragm

Vacuum breaker: Motorized

Fog nozzles

Turning gear motor 460 vac

Turning gear panel

### Sight flow for the oil from the

- No. 1 bearing is located on front standard
- No. 2 bearing is located on bearing bracket
- No. 3 bearing is located on bearing bracket
- No. 4 bearing is located on bearing cap
- No. 5 bearing is located on bearing cap

### Lifting devices

- Rotor lifting beam
- Hydraulic jacks for initial opening of joint
- Casing lifting sling

## TURBINE CONTROL SYSTEM

Electrohydraulic control

## EMERGENCY TRIP SYSTEM

Stop valve (full arc)

Electrical trip device

Nonreturn valve trip relay

Blowdown valve

Air dump valve

Right-hand reheat stop and intercept valve

## **EMERGENCY TRIP SYSTEM (CONT'D)**

Left-hand reheat stop and intercept valve

Low bearing pressure trip relay

Low vacuum trip switch

Thrust wear detector

Overspeed governor exerciser

Overspeed governor

Emergency trip

Manual trip signal switch

## **LUBRICATION AND HYDRAULIC SYSTEM**

Oil cooler type: Gravity flow

Cooling water: Fresh

Oil tank size 6 x 12 x 5½ feet

Oil tank capacity 1750 gallons

Oil level gage: Alarm contact

Low bearing oil pressure alarm switch: Closes at 18 psig; opens at 22 psig

Bearing and seal oil pump 460 vac  
Pump test solenoid valve

Emergency bearing and seal oil pump 125 vdc  
Pump test solenoid valve

Bearing header transmitter

## **HYDRAULIC POWER UNIT**

Pump motors(2) 460 vac, speed 1200 rpm

Pump test solenoid valve

Thermometer

Pressure gage

Pressure transmitter: Electric

## HYDRAULIC POWER UNIT (CONT'D)

Fluid-level alarm

Low-hydraulic-pressure alarm switch

Nonreturn valve trip relay

## SHAFT SEAL AND VENT SYSTEM

Steam seal regulator

Gland exhauster system: Surface condenser and motor-driven air blower  
Motor 460 vac

## AUXILIARY DEVICES

Zero speed device alarms at zero rpm

Active thrust wear detector alarm and trip: Closes at 21 psig; opens at 17 psig

Inactive thrust wear detector alarm and trip: Closes at 21 psig; opens at 17 psig

## STEAM VALVE SWITCHES

Stop valve circuit breaker switch

Stop valve closed position switch

Stop valve test position switch

Stop valve open position switch

Reheat stop valve circuit breaker switch

Reheat stop valve open position switch

Reheat stop valve closed position switch

Intercept valve circuit breaker switch

Intercept valve open position switch

Intercept valve closed position switch

Intercept valve quick closing position switch

Blowdown valve switch



## TEMPERATURE INDICATING DEVICES

Dial thermometers on turbine for oil drains from

- Active thrust
- Inactive thrust
- No. 1 bearing
- No. 2 bearing
- No. 3 bearing

Remote indications from oil drains

- Active thrust
- Inactive thrust
- No. 1 bearing
- No. 2 bearing
- No. 3 bearing
- No. 4 bearing
- No. 5 bearing

Temperature measuring devices for oil cooler

- Oil in
- Oil out

Thermocouples in bearings

- Upper half of active thrust bearing
- Upper half of inactive thrust bearing
- No. 1 bearing
- No. 2 bearing
- No. 3 bearing
- No. 4 bearing
- No. 5 bearing

Exhaust temperature switch alarms at 175 F and trips and alarms at 225 F

Oil cooler temperature switch alarms at 130 F

## ESTIMATED GENERATOR DATA

GENERATOR NO. 316X282

### NAMEPLATE DATA

2 Poles, 3 Phase, Wye Connected, 60 Hertz  
 Total temperature at rating guaranteed not to exceed:  
 100 C on armature by detector, 120 C on field by resistance  
 Maximum cold gas temperature: 46 C  
 Inlet water: 95 F

	Rating	Capability	Capability
Gas 98% Purity (PSIG)	30	15	0.5
KVA	122,000	112,240	85,400
Armature Amps	5104	4696	3573
Armature Volts	13,800	13,800	13,800
Field Amps	621	588	498
Excitation Volts	375	375	375
Power Factor	0.90	0.90	0.90

### DESIGN DATA

Gas 98% Purity PSIG	Maximum KVA One Cooler Out of Service
30	97,600
15	89,792
0.5	68,320

No-Load Field Current	274 Amperes
Three Phase Armature Winding Capacitance	0.903 Microfarads
Armature Winding DC Resistance (per phase)	0.00193 Ohms at 100 C
Field Winding DC Resistance	0.520 Ohms at 125 C

### COLLECTOR AND BRUSH DATA

Collector brushes: 28 per set	Recommended Grade: National Carbon 634
Collector minimum safe operating diameter: 12 inches	
Shaft grounding brushes: 2 per set	Recommended Grade: National Carbon 634
If brushes spark or chatter, refer to: GEK-35474	

### GAS COOLER DATA

Inlet water temperature: 95 F	Water flow at rated load: 792 gpm
Head loss through cooler: 12.5 feet	Gas flow through generator: 63,000 cfm
Gas space in generator: 1640 cubic feet	

### AIR FILTER

Type of Air Filter	Farr 44
Size of Air Filter	30 x 10 x 2
Number of Air Filters	2

**REACTANCE DATA (PER UNIT)**

**DIRECT AXIS**

**QUADRATURE AXIS**

Saturated Synchronous	(Xdv) 1.667	(Xqv) 1.596
Unsaturated Synchronous	(Xdi) 1.667	(Xqi) 1.596
Saturated Transient	(X'dv) 0.175	(X'q) 0.430
Unsaturated Transient	(X'di) 0.236	
Saturated Subtransient	(X''dv) 0.122	(X''qv) 0.118
Unsaturated Subtransient	(X''di) 0.167	(X''qi) 0.166
Saturated Negative Sequence	(X2v) 0.115	
Unsaturated Negative Sequence	(X2i) 0.159	
Saturated Zero Sequence	(Xov) 0.057	
Unsaturated Zero Sequence	(Xoi) 0.073	
Leakage Reactance	(XLM,OEX) 0.136	
	(XLM,UEx) 0.136	

**Field Time Constant Data (Sec. at 125 C)**

Open Circuit	(T'do) 5.533	(T'qo) 0.380
Three Phase Short Circuit Transient	(T'd3) 0.580	(T'q) 0.380
Line to Line Short Circuit Transient	(T'd2) 0.901	
Line to Neutral Short Circuit Transient	(T'd1) 1.045	
Short Circuit Subtransient	(T''d) 0.023	(T''q) 0.023
Open Circuit Subtransient	(T''do) 0.033	(T''qo) 0.083

**Armature DC Component Time Constant Data (Sec. at 100 C)**

Three Phase Short Circuit	(Ta3) 0.248
Line to Line Short Circuit	(Ta2) 0.248
Line to Neutral Short Circuit	(Ta1) 0.206

**Per Unit Armature Winding Sequence Resistance Data**

Positive	(R1) 0.003
Negative	(R2) 0.014
Zero	(Ro) 0.005

Rotor Short-time Thermal Capacity ( $I_2$ ) <sup>2</sup> t	30
Turbine and Generator Combined Inertia Constant (H)	2.75 KW Sec./KVA



