



**Working Together for a  
Better Tomorrow. Today.**

## **SPECIFICATION PACKAGE**

**for**

## **LOW NO<sub>x</sub> CONVERSION BURNERS**

**Bid Opening Date/Time**

**Thursday, November 10, 2011 @ 2:00 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**

**City of Grand Island – Utilities Department  
Platte Generating Station  
308/385-5496**

**Date issued: September 27, 2011**

**ADVERTISEMENT TO BIDDERS  
FOR  
LOW NO<sub>x</sub> CONVERSION BURNERS  
FOR  
CITY OF GRAND ISLAND, NEBRASKA**

**Sealed bids will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until Thursday, November 10, 2011 at 2:00 p.m. local time for Low NO<sub>x</sub> Conversion Burners, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall Council Conference Room #1 located on 1<sup>st</sup> floor of City Hall. Submit an original and three copies. Bid proposal package is also available on-line at [www.grand-island.com](http://www.grand-island.com) under Business-Bid Calendar. Bids received after the specified time will be returned unopened to sender.**

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 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 fourteen (14) 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 in clearly marked and separate envelopes will result in your bid not being opened or considered.** Surety companies authorized to do business in the State of Nebraska must 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 bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

**Advertised  
Grand Island Independent**

**LOW NOx CONVERSION BURNERS**  
**BID DATA FORM**

CITY OF GRAND ISLAND  
GRAND ISLAND, NE

The undersigned bidder, having examined all specifications and other bidding documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the specified materials and equipment, hereby proposes to provide such equipment 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*	\$ _____
Total Base Bid	\$ _____
Option (Air flow and Measurement System)	\$ _____
Recommended Spare Parts	\$ _____

**\* 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 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.**

- By checking this box, Bidder acknowledges that Addenda Number(s) \_\_\_\_\_ were received and considered in Bid preparation.
- By checking this box, Bidder acknowledges the specified completion date of the project is **December 30, 2012..**

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.*

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

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

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

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

By checking this box, Bidder acknowledges there are Exceptions noted to the bid.  
**NOTE: Any exceptions to specifications must be fully explained on a separate sheet attached to bid.**

**CHECKLIST FOR BID SUBMISSION**

**FOR**

**LOW NOx CONVERSION BURNERS**

**Bids must be received by the City Clerk before 2:00 p.m. on Thursday, November 10, 2011.**

The following items must be completed for your bid to be considered.

- A signed original and three copies of the bidding documents.
- A reference list of bidder and each subcontractor involved in the bid including at least three projects of similar scope and complexity.
- A summary of the experience of the project supervisor proposed for this project.
- Firm lump sum pricing; firm unit pricing in case adjustments are necessary, and breakout of sales tax pricing. Also pricing for additional CFD runs, per additional run.
- A proposed construction/test schedule during the fall 2012 outage.
- Any Modeling that is required to properly engineer the system to meet the requirement of this specification.
- Describe in writing all operating parameters that must be achieved to meet the required NOx and CO emissions.
- A description of the design system proposed, including a list of all the major components that are required, and all hard facing overlay data sheets for proposed equipment.
- Selection of Nebraska Sales Tax Option.
- Acknowledgment of Addenda Number(s) \_\_\_\_\_.
- Bidders must complete and sign the Bid Data Form provided in these Documents. All blank spaces must be filled in. Bidders shall acknowledge receipt of any Addenda information on the Bid Data Form.
- A certified check, cashiers check or bid bond 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 in clearly marked and separate envelopes will result in your bid not being opened.

*Please check off each item as completed.*

\_\_\_\_\_  
Company

\_\_\_\_\_  
Signature

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

## 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.

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.

### 4. SUBMISSION OF BIDS.

All Bids must be submitted intact not 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 here in. Each Bid 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 his Bid for a period of 30 days after bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond and Payment Bond each in the full amount of the Contract price within the time specified.

The Attorney-in-Fact that executes this bond in behalf of the Surety must attach a notarized copy of his power of attorney as evidence of his 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 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:

Conformance with the terms of the Bid Documents.

Bid price.  
Cost of installation.

Suitability to project requirements.  
Delivery time.

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

#### 9. PERFORMANCE AND PAYMENT BONDS.

The successful Bidder 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 located 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 his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

#### 10. 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.

#### 11. 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.

#### 12. 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 *LOW NOx CONVERSION BURNERS*; 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 the 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, or themselves, and its, his, 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:

Base Bid:	\$ .00
Sales Tax on Materials/Equipment:	\$ .00
Sales Tax on Labor:	<u>\$ .00</u>
Total	\$ .00

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 LOW NOx CONVERSION BURNERS.

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 **December 30, 2012.**

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.

**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 \_\_\_\_\_

**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 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Bids shall include the following on the **outside** of the mailing envelope: "**LOW NOx CONVERSION BURNERS**". All sealed bids are due no later than **Thursday, November 10, 2011 at 2:00 p.m. local time**. Submit **an original and three copies** of the bid to:

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

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 Council Conference Room #1 located on 1<sup>st</sup> floor of City Hall. Any bid received after the specified date will not be considered. No verbal bid will 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 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 cashiers check, or bid bond payable to the City 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 fourteen (14) 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 in clearly marked and separate envelopes will result in your bid not being opened or considered.** Surety companies authorized to do business in the State of Nebraska must issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; performance and payment bonds are required for this project as outlined in the Detailed Specifications and Instructions to Bidders.

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.** Please contact Lynn Mayhew at 308-385-5492, for questions concerning this specification.

# LOW NO<sub>x</sub> CONVERSION BURNERS

## Detailed Specifications

### SCOPE

The purpose of this project is to supply and install Low NO<sub>x</sub> burners, Separated Over Fired Air (SOFA) and supplementary equipment at Platte Generating Station as described herein.

#### **Description**

The Platte Generating Station is located at 1035 West Wildwood Drive in Grand Island, Nebraska.

Platte Generating Station is a 100 MW coal fired steam-electric generating unit placed in service in 1982. The boiler was designed and built by Combustion Engineering. The unit is currently able to produce a gross load of 109 MW (100 MW net) firing PRB coal. It is a four (4) cornered, tangentially-fired unit with 4 levels of burners. The boiler burns pulverized coal via four CE-Bowl design (model 683 "RS" Bowl Mills). These are Shallow Bowl Mills and members of the 70" – 703 Mill Family.

The contractor shall provide all material, equipment, quality control, engineering support, project management, training, installation, tuning and miscellaneous items as described herein. Although significant detail is provided in this specification, it is the City of Grand Island intent that the contractor provides all required material, equipment, labor, etc. so that the Low NO<sub>x</sub> system is complete, installed and allows safe and reliable operation when this work is finished. Additionally, the contractor shall ensure that any existing equipment revised with the contractors Low NO<sub>x</sub> system is adequate to provide safe and reliable operation.

### LOW NO<sub>x</sub> SYSTEM REQUIREMENTS

#### **General Requirements**

Contractor shall provide Low NO<sub>x</sub> burners and Separated Over Fired Air (SOFA) that meets the following process requirements:

NO<sub>x</sub> less than 0.15 lb/MMbtu, CO less than 100 ppmvd corrected to 3% Oxygen.

NO<sub>x</sub> and CO requirements shall be met for gross loads firing sub-bituminous PRB coal.

Superheat (SH) steam temperature of 1005 degrees F (+/- 5 degrees F)

Reheat (RH) steam temperature of 1005 degrees F (+/- 5 degrees F)

Loss on Ignition (LOI) for ash not to exceed 1%

RH and SH spray flows shall not increase. Any reduction in flows shall be stated.

Minimum excess O<sub>2</sub> of at least 3.0% (measured at the economizer outlet) averaged across three probes with no single probe less than 2.0% and no single probe more than 3.0% at full load.

Excess air turndown shall be adequate to ensure no more than 3.5% excess O<sub>2</sub> at all load levels.

#### **Economizer outlet gas temperature**

Contractor shall provide a guaranteed value for boiler efficiency for the corresponding economizer outlet temperature.

Contractor shall provide a temperature with a  $\pm 15^{\circ}\text{F}$  range to be guaranteed as part of the contract.

Burner tilt operation shall be within  $\pm 30$  degrees of horizontal

City of Grand Island Utilities will provide process data in a spreadsheet to all Contractors.

Contractor shall provide final modeling results report showing the performance of modified boiler at all load ranges and maximum continuous rating (MCR).

Modifications shall be designed to allow the boiler to operate safely and reliably from start-up through boiler maximum continuous rating (MCR) while burning sub-bituminous PRB coal.

All stationary coal nozzles will be supplied with a hard facing overlay.

All auxiliary air tips, igniters, and fuel oil gun diffusers shall be replaced as part of the work scope.

A jacking bolt assembly for coal nozzle adjustment shall be provided.

All coal piping from the burner to and including the second elbow shall be replaced as a part of this project with new elbows. The existing pipe supports shall be analyzed and hanger designs modified and supplied accordingly.

Low NOx burner systems shall consist of a single coal nozzle and tip per coal pipe.

If waterwall modifications are required by the design, proper waterwall circulation shall be verified.

Contractor shall provide ceramic orifices and riffle elements to fit within Platte Generating Station's existing equipment.

Any new waterwall panels added or replaced in the boiler will require the elimination of all existing field welds within one foot of the new panels.

All new windbox damper drives shall be provided by contractor as part of this project. The new drives shall be Type-K Pneumatic Drives with TZID smart positioner and 4-20 mA position feedback.

All required drives for the SOFA control provided by contractor shall be Type-K Pneumatic Drives with TZID smart positioner and 4-20 mA feedback.

Any additional transmitters shall be Yokagowa XF.

All gaskets, nuts, bolts, and other misc. loose hardware shall be provided as part of the project scope.

Any existing field equipment that is considered an interference and/or required to be moved for the installation of the new equipment shall be addressed in the bid and included in the Low NOx system. This includes, but is not limited to scanners, igniters, piping and etc.

If new drives, instruments, and other equipment are added to the boiler, ductwork, etc., the bid shall also include structural modifications to provide access to that new device at the appropriate locations (stairways, platforms, etc.) to be approved by the City of Grand Island. If the maintenance or operation of the device requires an individual's feet to be 4 feet off the lower access level, permanent OSHA approved structures shall be included. If the access is less than 4 feet, ladders will be considered acceptable. The contractor shall consider a fall hazard to the ground in this review.

The Platte Generating Station Boiler is an exterior boiler with a roof above the fire enclosure, if the SOFA is required above this elevation, all roof penetrations shall be weather tight and ductwork insulated, and included in the bid.

Contractor shall include pricing for a primary air flow and air flow mass measurement system per burner. The air flow and measurement system shall be priced as an option and not included in the base bid.

The airflow measurement system shall be capable of accurately measuring airflow to within 2-3% of actual.

The system shall provide density compensated air flow.

The system shall output via 4-20 mA control signal.

The system shall be designed to prevent pluggage.

Contractor shall include installation of a temporary test points to measure NO<sub>x</sub>, CO and O<sub>2</sub> to verify in-situ instrumentation.

Contractor shall provide an NFPA 85 compliant Low NO<sub>x</sub> system

All state and federal laws, applicable standards and procedures shall be applied to the design of the Low NO<sub>x</sub> systems.

## **LOW NO<sub>x</sub> SERVICES REQUIREMENTS**

### **Start-Up Support and Tuning**

One week (7 days) around the clock (24/7) during initial start-up per the outage schedule.

See outage schedule

Two weeks (14 days) around the clock (24/7) for final tuning.

Low load tuning will be completed during non peak times.

Adjustments to control logic will be made during day shift (8:00 AM - 3:30 PM CT)

The final system performance test will require the Contractor to prove that the system can achieve the warranted numbers for NO<sub>x</sub>, CO, steam temperatures, and other conditions as previously specified. The warranted numbers for NO<sub>x</sub> and CO, steam temperatures, and other conditions will be tested for the loads listed in Low NO<sub>x</sub> System Requirements, and each load will be held for a minimum of eight (8) hours. All data used to verify compliance with emission warranties shall be averaged every hour over the course of those test periods. If the hourly average does not meet the guaranteed numbers then the load will be considered failed and additional tuning must be performed. Averaged values for NO<sub>x</sub> and CO and the other testing conditions shall meet guaranteed results in each of the tests in order for the performance test to be approved.

Contractor shall provide complete coal mill set-up for the City of Grand Island Platte Generating Station Unit 1.

### **Training**

Three 8-hour independent operations training sessions during the weekday shall be scheduled with the Contractor.

One training session to be video recorded.

The training sessions shall include approximately 1/3 of the time on Low NO<sub>x</sub> theory and the balance of the time on the specific system purchased.

All training materials shall be provided; (3) paper copies and (3) CDs

## **Construction Services**

Contractor shall provide complete installation including all boiler modifications as well as installation for any tilt control including conduit and wiring runs as well as calibration scope.

Contractor shall be responsible for quality control and the support on a potentially 24/7 basis for the duration of the installation outage.

It is the intent that the contractor provide an on-site technician during all project construction activities, however, the exact duration is unknown and could range from 6-10s to 7-12s.

Installation shall be during the fall 2012 outage, tentatively scheduled to start September 29, 2012, a schedule shall be submitted with the bid showing key installation items.

The Contractor shall provide all engineering, design, equipment, tools, welding machines, welding leads and consumables, material, labor, supervision, shipping and all other equipment and materials necessary to completely perform the work.

## **Safety**

The Contractor shall follow all applicable OSHA regulations and plant safety regulations. A 15 minute safety briefing will be held for all workers who will be on site for the project.

## **Qualifications**

The Contractor shall be a firm specializing in low NOx burners used in the power generation industry, including complete installation and engineering to tune the unit to achieve best possible results.

The Contractor shall be capable of fully performing the work without the assistance of plant personnel.

The Contractor shall possess a valid ASME "R" stamp. All welding shall be performed using qualified welding procedures and welders under the requirements of Section IX of the ASME Boiler and Pressure Vessel Code.

All welds shall be NDT and 10% of the welds shall be X-rayed, all inspection data shall be reported to the City of Grand Island. A failure rate of more than 10%, shall require 100% of all welds to be X-rayed. Any failed welds will be repaired at the Contractor's expense.

## **Miscellaneous Requirements**

Any Modeling that is required to properly engineer the system, to meet the requirements of this specification shall be included in the bid and noted on the schedule.

All drawings associated with the proposed modifications will be reviewed by City of Grand Island to fabrication with no more than two week review.

All materials needed to complete this project as designed by the Contractor shall be manufactured, built, or purchased by the Contractor, and delivered to City of Grand Island Platte Generating Station (FOB Jobsite) as part of the total bid scope.

A complete list of all drawings for this project shall be provided to City of Grand Island, and electronic copies of all these drawings shall also be supplied as part of the work scope in various formats, however, final submittal shall be in AutoCAD 2004 format.

All drawings shall be property of City of Grand Island upon completed drawing submittals.

Following installation of the new low NOx system, the Contractor shall be required to make changes and corrections to the drawings, and provide a complete set (both electronically and three (3) hardcopies) to City of Grand Island of the as-built drawings.

All drawings will be property of City of Grand Island upon completed drawing submittals.

Prior to installation a complete operations and maintenance manual shall be provided by the contractor (both electronically and three (3) bound hardcopies).

Recommended spare parts shall be included in the bid as a separate line item.

The Contractor shall provide a detailed control scheme including SAMA logic and I/O list for all new equipment added (SOFA drives, etc.) and include the cost to integrate into the Bailey Infi 90 DCS controls can be generated prior to the installation of the low NOx conversion.

The Contractor shall provide, upon delivery of the materials for the low NOx conversion, a complete list of the materials with estimated weights used for the conversion. The Contractor shall also provide a recommended spare parts list, and a possible vendor for each of those items.

Contractor shall provide a competent person to inventory all items at job site supplied to the City of Grand Island per the prescribed dates in the schedule requirements.

Complete bill of materials and/or packing slips shall be provided with check list and any errors.

Contractor shall provide a waterwall circuit analysis.

Contractor shall provide a competent person on-site for Low NOx System walk-down with outage team. This will not take more than 8 hours.

Contractor shall provide a document listing the total lay down area required for all materials.

All storage requirements shall be listed.

### **Additional Work**

Additional coal piping that is needing replacement as listed below shall be supplied and installed during the same time. The elbows and first straight section as mentioned above along with the following sections:

#### A Mill

Pipe A3 part number FP-2, Pipe A4 part number FP-73, Pipe A1 part number FP-20, Pipe A2 part number FP-2

#### B Mill

Pipe B1 part number FP-20, Pipe B2 part number FP-73, Pipe B2 part number FP-80, Pipe B3 part number FP-7, Pipe B4 part number FP-2, Pipe B4 part number FP-7

#### C Mill

Pipe C3 part number FP-2, Pipe C3 part number FP-7, Pipe C4 part number FP-20, Pipe C4 part number FP-16, Pipe C2 part number FP-2

#### D Mill

Pipe D1 part number FP-2, Pipe D2 part number FP-2, Pipe D4 part number FP-20, Pipe D3 part number FP-28, Pipe D3 part number FP-16

An attachment includes a listing of all pipe sections.

## **SCHEDULE**

### **Outage Dates**

An outage is scheduled for October 6-13, 2011 to allow for routine maintenance, and at that time there will be time for a bidder to inspect the boiler, and take any measurements that would improve the process of design and remove any unknowns in the bidding process.

An outage to occur in October 2012 for a duration of no more than six weeks shall be scheduled for the installation. A schedule shall be submitted including the following items:

- Detailed status list of all long lead items (> 60 days) and other materials ordered. Includes estimated arrival date.
- Competent person on-site for Low NOx System walk-down with outage team. Date subject to change +/- 15 days. This will not take more than 8 hours.
- Complete list of drawings and description organized by drawing number.
- Updated status list of all long lead items (> 60 days) and other materials ordered. Includes estimated arrival date.
- All drawings for this project provided.
- Complete bill of materials provided.
- Operations and maintenance manuals provided.
- Updated status list of all long lead items (> 60 days) and other materials ordered. Includes estimated arrival date.
- Lay down requirements provided.
- All non-long lead items purchased with scheduled delivery dates.
- Updated status list of all materials ordered. Includes estimated arrival date.
- All materials received and at job site.
- All materials inspected and verified with contractor at job site.
- Name and contact numbers of all field support personnel.
- Field support personnel job site date established.
- Estimated date for tuning.

**PRICING**

**Payment Schedule**

<b>Payment (no earlier than listed dates)</b>	
10% Upon Contract Award (invoice received no later than)	12/15/2011
15% Upon Receipt of Drawings	2/15/2012
30% Upon Long Lead Materials Ordered	3/01/2012
15% Upon Completed Fabrication	9/6/2012
15% Upon Goods at City of Grand Island's site	9/21/2012
15% Upon Successful Performance Testing	1/3/2013

**BID SUBMITTALS**

The Contractor shall describe in writing all operating parameters that the City of Grand Island Platte Generating Station must achieve to meet the required NOx and CO emissions. These may include but are not limited to the following items:

- Coal quality
- Pulverizer (Mill) fineness
- Equipment operation (fans, feedwater heaters, sootblowers, etc.)

Bidder shall provide modeling results for sub-bituminous coal.



Interim modeling results showing the performance of modified boiler at listed load ranges (in system requirements charts, section 2.1.1.1.1) and MCR.

Pricing for additional CFD runs, per additional run, shall be included.

Each Contractor shall submit a description of the proposed design for their NOx reduction system, along with a list of all the major components that are required for the conversion.

All hard facing overlay data sheets for proposed equipment.

A list of comparable units in the world, with emphasis on the United States, where Contractor has provided similar modifications shall be included. If the Contractor does not have any installations at similarly designed plants, then a list of several other power plants where the Contractor has their low NOx modifications installed shall be submitted

NOx and CO emissions both before and after the installation shall be included.

Preference shall be given to tangentially fired units, especially those burning PRB coal.

Line sheet of field service engineer/technician.

Line sheet shall include hourly time and material rates.

Per diem, travel and other miscellaneous costs associated with additional site-visits not specifically stated in service requirements.

If it does not directly relate to the above listed work, then the Contractor may include that piece as an optional item with its cost split out from the main section.

The Bidder shall include guaranteed NOx and CO levels with the proposed low NOx system.

All relevant information requested on this form shall be supplied.

#### 1) Schedule of Bid Period Activities

(1) Activity	(2) Date Required
Request for Bid Sent to Contractors	September 27, 2011
Individual Bidder Meetings	October 10 - 13, 2011
Scope Questions Due	October 26, 2011
Final Bids Due to City of Grand Island	November 10, 2011 (2:00 PM CT)
Contract Signed	December 14, 2011

#### 2) Individual Meeting with Contractors

a. Please contact Lynn Mayhew to schedule meeting date.

#### 3) Notice of Conflicts or Errors in Bid Documentation

a. City of Grand Island expects due diligence from each Contractor in making City of Grand Island aware of errors and key mistakes in the request for bids and other supplied documentation. This notification shall take place prior to the submission of final bids by the vendors to allow City of Grand Island sufficient time to make corrections and clarifications.

#### 4) Contact for Questions

All questions relating to this project shall be routed to:

Lynn Mayhew  
Plant Superintendent  
Platte Generating Station  
1035 W Wildwood Drive  
Grand Island, NE 68803  
308-385-5492  
[lmayhew@giud.com](mailto:lmayhew@giud.com)

## 5) Breakdown of Bid Price

- a. Even though bids will be lump sum, City of Grand Island is asking that the bid costs be broken down by several key components, namely engineering and design, materials and fabrication, and then training and technical support (both for installation and tuning). This information will be reviewed to verify that costs fall within expected ranges, and that no major part of the work scope is being overlooked. No work scope will be split out of the bid package and given to another party based on this information.

## 6) List of Subcontractors

- a. City of Grand Island shall be notified in advance shall the Contractor decide to enter into any kind of partnership, key agreement, or mutual alliance with any third party who was not part of the bidding process, where the work is directly related to the work contained in this bid.

## 7) Key Personnel Information

- a. Each Contractor shall provide a list of the key personnel who will be involved in this project (organizational chart), along with their contact information (address, phone numbers, and email address) as well as a description of their role in this project, and their scope of responsibility.

## 8) Warranty

- a) All Contractor supplied replacement parts shall have a three (3) year minimum wear resistance and reliability warranty.

## 9) Quality Control

- a) All Low NOx Systems shall meet the most recent revision of all applicable codes and standards.
- b) Contractor shall provide a copy of the fabrication shop's QA/QC procedures.
- c) City of Grand Island reserves the right to visit the fabrication shop during the fabrication of each unit.

## 10) Attachments

- a. Pgs 1-14 Steam Generator Drawings
- b. Pgs 15-20 Coal Nozzle Drawings
- c. Pg 21 Coal Quality Data
- d. Pg 22 Contract Data Sheet
- e. Pg 23 Fly Ash Analysis
- f. Pg 24 Bottom Ash Analysis
- g. Pg 25 Mill Fineness Test
- h. Pgs, 26-28 Coal Piping Drawings
- i. Pgs, 29-32 Coal Piping Part Numbers

## GENERAL INFORMATION

### 1) Access

Access to the City will be available at all times and the Contractor may determine working hours, however, the City staff will only be available during normal, daytime, weekday working hours.

There is no separate contractor entrance at the Platte Generating Station. There is one gate with a card access security system and the Contractor may request to use access cards rather than request entry and exit each trip. There is a \$25.00 charge for all access cards that are not returned when the job is completed.

2) **Service Rates**

The Contractor shall include in the Bid firm lump sum pricing.

The Platte Generating Station is NOT tax exempt and is subject to 7.0% sales tax. See the Nebraska Department of Revenue web site at [www.revenue.state.ne.us](http://www.revenue.state.ne.us) for contractor's tax information.

3) **Insurance**

The Contractor shall comply with the attached Insurance Requirements.

4) **Work Site**

The Contractor and Contractor's employees shall confine their operations to the immediate construction area. They shall use due care in placing construction tools, equipment, excavated materials, and construction materials and supplies so as to cause the least possible damage to the property. The Contractor shall furnish and maintain all necessary safety equipment (such as barriers, signs, warning lights, and guards) and to provide adequate protection of persons and property.

Good housekeeping is essential, and shall be practiced throughout the construction period. The Contractor and Contractor's employees shall maintain a clean and safe work site free from trash and debris. To maintain a clean environment, Contractor will remove all related debris and return the site to clean state upon job completion.

5) **Performance and Payment Bonds**

The successful 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 located 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 his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

**QUESTIONS ABOUT REQUEST FOR BIDS CONCERNING  
LOW NOX CONVERSION BURNERS PROJECT  
City of Grand Island, Platte Generating Station**

**Questions must be received no later than 3:00 p.m., Central Standard Time, October 26, 2011**

**To: CITY OF GRAND ISLAND, PLATTE GENERATING STATION  
LYNN MAYHEW, PLANT SUPERINTENDENT**

**Telephone Number: 308-385-5492  
FAX Number: 308-385-5353  
E-mail: lmayhew@giud.com**

**From: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Fax Number: \_\_\_\_\_  
Date: \_\_\_\_\_**

**Questions:** (Please specify page number and section.)

**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 be not 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 be not 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 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.**