



City of Grand Island

Tuesday, October 23, 2007

Council Session

Item G9

**#2007-267 - Approving Bid Award for Emergency Generator
Repair - Platte Generating Station**

Staff Contact: Gary R. Mader

Council Agenda Memo

From: Gary R. Mader, Utilities Director
Wesley Nespor, Asst. City Attorney/Purchasing

Meeting: October 23, 2007

Subject: Approving Authorization for Emergency Generator Repair –
Platte Generating Station

Item #'s: G-9

Presenter(s): Gary R. Mader, Utilities Director

Background

The Platte Generating Station is the primary electric generating plant for the City of Grand Island and provides over 90% of the City's electric ity, with the rest coming from the Burdick Station or purchased from other utilities. The reliability of Platte is critical for providing the lowest cost power to the City. To maintain reliable unit operation, a major inspection of the plant's turbine-generator is performed every five years. The inspection is performed in the fall of the year, which allows the purchase of less-costly replacement power than during peak load periods of the summer or winter. This inspection involves completely dismantling the turbine-generator and evaluating the condition of every component. Components that are judged not suitable for supporting another five years of operation are repaired or replaced. Based on experience and previous inspections, most items needing major repair or replacement are anticipated and provisions for corrective action are made in advance of the plant outage. This allows specifications to be issued for bid and procurements made in a timely manner.

In some cases, however, the major overhaul inspections find unforeseen problems and arrangements must be made to support the outage schedule. With disassembly and inspection of the generator, extensive loose stator wedging was found. The wedges are made of a non-conductive material and mechanically secure the windings of the generator stator. If the windings are not held firm, the resulting vibration will eventually wear away electrical insulation laminations on the generator windings and cause an electrical failure of the generator. It is not unusual to find some loose wedges during inspection. These can usually be tightened in place by maintenance staff. This year, though, inspectors determined the condition of the wedging to be such that it could not be tightened further. Continued operation with the loose condition could affect unit reliability and could result in major repairs if insulation failure were to occur.

The cost of extending the outage is estimated to be over \$50,000 per day for replacement power and contractor costs. To avoid affecting the outage schedule, it was necessary to initiate repair as soon as possible after the problem was found. Discussions with Department management and the City legal staff recommended the project to replace the loose stator wedging of the generator be handled as an emergency procurement. Plant staff immediately solicited written bids from contractors specializing in utility generator repair.

Discussion

The following bids were received by generator repair contractors (copies attached).

<u>Bidder</u>	<u>Bid Price</u>
Great Plains Technical Services, Mandan, ND	\$ 78,830.00
NAES Turbine Services, Houston, TX	\$ 97,500.00
Power Generation Service, Anoka, MN	\$285,000.00

All bidders could comply with the required schedule constraints. Great Plains Technical Services provided the low bid in the amount of \$78,830.00.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the Council approve implementation of the City's Emergency Procurement Procedures, and authorize Great Plains Technical Services of Mandan, ND to perform the repairs in the amount of \$78,830.00.

Sample Motion

Move to approve the use of the City's Emergency Procurement Procedures and authorize Great Plains Technical Services of Mandan, ND to perform the repairs.

FROM :

FAX NO. :

Oct. 10 2007 05:38PM P1

**GREAT PLAINS
TECHNICAL
SERVICES**2719 37th St. NW, Suite 1, Mandan, ND 58554
Phone: (701) 863-5760 * Fax: (701) 863-5783**QUOTE****DATE:** October 10, 2007**PAGES:** 1**TO:** City of Grand Island Utilities
ATTN: Don Gannon**PHONE:** 308-385-5492
FAX: 308-385-5353**FROM:** Bruce Schumaker
TOLL FREE: 888-563-0111
PHONE: 701-863-5760
FAX: 701-863-5783
EMAIL: gots@btinet.net**QUOTE#:** 101007BS**PO#:**

<u>QTY.</u>	<u>DESCRIPTION</u>	<u>PRICE</u>
1	100 MW Generator - Rewedge	
	* Remove and prep wedges	\$3,600.00
	* Rewedge	\$33,039.00
	* Travel	\$7,300.00
	* Mileage	\$2,346.00
	* Expenses	\$5,545.00
	* Materials	\$27,000.00
	*price may vary on materials based on preliminary data	
	Total	\$78,830.00

Completion Date: Sunday, October 21, 2007 - based on delivery of
wedges on Monday, October 15.

Any out-of-scope work would be completed only after approval
from City of Grand Island Utilities at \$80.00/hr.

Thank you for the opportunity to quote this rewedge work.





7618 Bluff Point Dr.
Houston, TX 77086
(832) 484-9400 Office
(832) 484-1808 Fax

October 11, 2007

City of Grand Island
100 E. First Street
Grand Island, Nebraska 68802

Attention: Roger Zawodniak/Don Gannon

Subject: Generator Stator Rewind & No. 3 Oil Deflector

Gentlemen:

NAES Turbine Services is pleased to provide the following prices for the No. 3 Oil Deflector and the Generator Stator Rewind.

Refurbishment of No. 3 inboard oil deflector:

Prices:

Oil Deflector	\$1,950.00
Credit	<u>\$450.00</u>
Total:	\$1,500.00

Generator Stator Rewind

Scope of Work

Rewedge on the 100 MW stator in Nebraska will be completed by Friday, October 19, 2007, assuming we get the go ahead this morning so I can get people on a plane. We will also commit to doing the job on time and material with a not to exceed of our fixed price – see the attached rate sheet (materials will be cost plus 20% and expenses will be cost plus 15%). We will perform an EL CID after wedge removal and after the rewedge to insure the core is service ready. We will also do a wedge tightness mapping after the rewedge with our Adwell test set. We are only proposing a full rewedge with new materials based upon the current wedge system and only proposing a full rewedge with new materials based upon the current wedge system and unit history – this is in the best interest of the owner and unit's longevity.

Here is a list of the materials we will supply: Item 1 Qty. 1 each – Flat Wedge Kit consisting of:

1134 each – Flat Center & Body Wedges, 6.250" Length, Eighteen (18) per Slot, Includes 5% Additional Items.

315 each – Flat Measurement Wedges, 6.250" Length, Five (5) per Slot, Includes 5% Additional Items.



132 each – Flat End Wedges with Locking Pin Hole, 6.250" Length, Two (2) per Slot, Includes 10% Additional Items.

264 each – G-11 Glass Epoxy Top Filler Strips, All 48.000" Length, in .010", .015", .031", .062", .093", & .125" Thickness, Four (4) per Slot, Includes 10% Additional Items.

297 each – Krempel Top Ripple Springs, .9mm, 38.000" Length, Includes 10% Additional Items.

132 each – Fiberglass End Wedge Locking Pins, .250" Diameter, Includes 10% Additional Items.

132 each – G-11 T-Locking Filler Blocks, 6.250" Length, Two (2) per Slot, Includes 10% Additional Items.

We will have wedges onsite in three days from time of arrival to site – about the exact time the old wedges will be removed and the stator slots are prepared for the new wedges.

Price:

Generator Stator Rewind **\$97,500.00**

If you have any questions, or require clarification, please contact the undersigned.

Thank you for this opportunity to offer NAES Turbine Services Division's services to your facility.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Giametta'.

Dominic Giametta
Field Manager
dominic.giametta@naes.com
(713) 302-2321 mobile

Embedded File:

Field Service Rate Sheet



Rate Sheet

**POWER GENERATION SERVICE, INC.**

TO: Mr. Rodger Zawodniak
City Of Grand Island
Platte Generating Station
Grand Island, NE

Quotation No.: 3130-1
Date: 10/11/2007

RE: Stator Rewedge
Platte Generating Station

Power Generation Service, Inc. is pleased to provide the following proposal for services subject to the attached Terms and Conditions. Notice of objection to any different or additional terms and conditions is hereby given. This quotation is valid for 30 days from its date unless otherwise stated in the quotation. If you have any questions, please contact the undersigned. Please indicate your acceptance by signing one of the copies and returning it to us.

POWER GENERATION SERVICE, INC. WILL FURNISH SERVICES TO REWEDGE THE STATOR ON THE REFERENCED UNIT.
SERVICES TO BE PROVIDED BY AGTS SERVICES OF AMSTERDAM, NY PER THE ATTACHED WORK SCOPE AND DIVISION OF RESPONSIBILITIES.

FIRM PRICE BID: \$285,000.00

\$285,000

cc: Carl Challengren PGS - Anoka Office
cc: Bruce Roth PGS - Anoka Office

Date: _____

Company: _____

By: _____

POWER GENERATION SERVICE, INC.

Pat Estabrook
Turbine / Generator Inspection Services Manager

ITEM #	ITEM	DESCRIPTION	TOTAL (US \$)
1	Full Stator Rewedge	<p>Firm price offer to perform a 100% stator rewedge, as follows:</p> <ul style="list-style-type: none"> ▪ Review electrical testing – performed by “others”. ▪ Remove core end baffles – to be reused. ▪ Perform 1st ELCID test (validates current condition of stator core). ▪ Remove all wedges. ▪ Reverse engineer replacement materials. ▪ Inspect core iron, bar armor insulation, slots, air ducts, etc. ▪ Hand clean core. ▪ Perform 2nd ELCID test (ensures no damage was done during unwedging). ▪ Install replacement body wedges. ▪ Install replacement locking end wedges – prevents migration of wedges due to stator vibration. ▪ Perform 3rd ELCID test (ensures no damage was done to core iron during wedging). ▪ Perform final electrical testing – Megger, PI, DC Leakage, Hipot – as desired by customer. ▪ Install core end baffles. ▪ Prep/paint core and end windings. ▪ Perform final inspection. <p>Wedge kit materials include: low-shrink black canvas tapered body (if sufficient clearance exists between top of bar and wedge dovetail), and end wedges, top ripple springs, and all necessary filler, epoxies, resins, and paint.</p> <p><i>Anticipated duration: 9 days, working 2-10 hour shifts per day, utilizing 1 Specialist, 2 Lead Winders, and 4 Winders.</i></p>	
		<p><i>Please note:</i></p> <p>* <i>A draft copy will be reviewed with and provided to customer prior to leaving site. A formal color report, with photos if applicable of areas of concern, will be submitted within 30 days of job completion.</i></p>	
		<p><i>NOTE: Any additional repairs, not identified at this time, will be billed at either Time & Material rates (rate sheet attached) or a mutually agreed upon firm price offer.</i></p>	
<p><i>Please call if you have questions!</i></p> <p><i>Weekend hours phone: (518) 441-9515 - Mike Bresney, or (518) 365-8353 - Vinny Rigasu</i></p>			

Signature:

William R. Dollard, Jr.

William R. Dollard, Jr.
Contract Manager

Enclosure

(518) 843-1112

DIVISION OF RESPONSIBILITIES

(unless otherwise addressed in Specification)

	AGT Services	Owner
Unloading, locating, and reloading contractor's equipment		X
Scaffolding		X
Welding Gases (propane & oxygen)		X
Heat lamps/heaters for equipment protection		X
Phone services (fax machine)		X
Office facilities (copier)		X
Sanitary Facilities (sink and toilet)		X
Protective covers for turbine deck, electrical equipment, etc. (outdoor units)		X
Trash receptacles and disposal		X
Electricians for all specialty electrical work		X
Designated hazardous material (flammable liquid) storage		X
D-C Test & Inspection Programs Only:		
Electric Power (110V)		X
NDT services (retaining rings, journals, etc.)		X
Dry generator (produce acceptable megger readings prior to mobilization)		X
Disconnect (prior to testing) and reconnect (upon completion of testing) generator links and neutral grounding transformer connections		X
Disconnect/ground RTDs		X
Open bushing box; ventilate; test for acceptable O ₂ levels		X
Test & remove all materials designated as hazardous by EPA and/or OSHA (asbestos & lead)	T&M	
Clean stator core/end windings (if contaminated) to allow safe high voltage testing environment	Included as part of completing rewedge	

PLEASE NOTE: Standard customer site support is also an essential part of any generator maintenance contract. The published support requirements are developed over time and with the understanding that certain utilities and/or mechanical support has to be in place and available to do the work in the manner it should be conducted. Sometimes just having adequate protection against weather or climate factors is necessary to assure that sensitive equipment or the health and safety of personnel are assured, which in turn assures that the work is processed and completed in a satisfactory manner. All support items listed are important and deemed equally necessary to perform the work according to schedule and contract terms. Any failure to support, as applicable to the location, site and/or environment may have an adverse impact to schedule and if the schedule is compromised due to lack of adequate support from the site or customer, AGT Services may seek to recover lost revenues that result.

(518) 843-1112

R E S O L U T I O N 2007-267

WHEREAS, the City of Grand Island, Utilities Department, invited bids for emergency generator repair at the Platte Generating Station; and

WHEREAS, three bids were received, opened and reviewed; and

WHEREAS, Great Plains Technical Services of Mandan, North Dakota, submitted a bid in accordance with the terms of the plans and specifications and all other statutory requirements contained therein, such bid being in the amount of \$78,830.00.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the bid of Great Plains Technical Services of Mandan, North Dakota, in the amount of \$78,830.00 for emergency generator repair at the Platte Generating Station is hereby approved as the lowest responsible bid.

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Adopted by the City Council of the City of Grand Island, Nebraska, October 23, 2007.

Margaret Hornady, Mayor

Attest:

RaNae Edwards, City Clerk