FOR BOARD ACTION

Agenda Item# 6.c.

Meeting Date:

1/24/05

SUBJECT:

SLP Unit 1 Turbine Generator Overhaul

PREPARED BY:

Wally Schlink, Director of Power Resources

ITEM DESCRIPTION:

SLP Unit 1 turbine generator is scheduled for a major maintenance overhaul beginning February 21 through April 1, 2005. The purpose of the inspection is to confirm machine integrity and to return the unit to as-designed condition and efficiency. The inspection is an industry standard and is required by our insurance carrier and by prudent utility practices. The schedule was established to have the unit available for the summer generation season. The unit was last overhauled in 1992.

The bid specification was developed in two workscopes. Workscope I is comprised of the work that is known and identified. Firm bids were requested for Workscope I. The second workscope is comprised of a list of repairs that are anticipated and most likely will be encountered when the machine is disassembled and inspected. The second workscope is a mixture of firm bids and estimates as the work is not defined or the extent of damages known prior to disassembly.

Bid specifications packages were distributed to thirteen turbine generator repair firms for the Unit 1 turbine generator overhaul. On January 18, 2005 seven bid packages were received for the project. One firm sent a no-bid notification and one bid package was returned unopened due to a change of address. The seven packages that were submitted on time and with the required bid bond were considered and evaluated.

HB Turbo submitted the bid with the lowest Workscope I price but failed to submit numerous documents required by the specification including manpower and time charts, location where work is to be performed, mode of component transportation, proof of sufficient carrier insurance, contact person and telephone numbers of previous clients, resumes of the Service Engineer and lead technicians and the hourly rates, and most importantly; evidence of prior satisfactory work experience in comparable work. Based on the lack of required documentation RPU staff was not able to evaluate or confirm the qualification of the bidder and staff recommends that the bid be disqualified for non-compliance with all of the terms of the bid specification.

The remaining six bid packages complied with the document, as well as other requirements of the bid package and additional evaluation was performed on those packages.

Power Generation Services Inc. is the lowest evaluated compliant bidder on Workscope I and the lowest bidder when the estimates of required work from Workscope II are evaluated. Staff estimates that the balance of work can be completed on a time & material basis not to exceed the total of

General Manager

Date

ROCHESTER PUBLIC UTILITIES

FOR BOARD ACTION

Agenda Item# 6.c.

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approved funds. All bidders submitted hourly rates for various disciplines as part of the bid package for extra work.

Attached is a matrix comparing the bid packages for the combined workscopes. This is an approved 2005 Capital and Major maintenance budget item.

UTILITY BOARD ACTION REQUESTED:

Staff recommends that the Board rejects the bid package from HB Turbo as non-compliant and approves a contract agreement with Power Generation Services Inc. to provide services and materials for the SLP Unit 1 Turbine Generator Overhaul as defined in the specification. The contract agreement will be for a firm price for Workscope I of the specification, and identified Workscope II items as determined by staff. The total amount is not to exceed \$250,000.

ROCHESTER P

| General Manager | Date |
|-----------------|------|

BID EVALUATION - SLP UNIT 1 TURBINE GENERATOR OVERHAUL

| WORKSCOPE I Grit Blasting 8,500.00 Non-Destructive Testing 5,000.00 | | | General | Dynamics & | | | | |
|---|----------------|--------------|-----------|------------|-------------|-----------|-----|-------------|
| | es Lovegreen | Westinghouse | Electric | Analysis | Duke & Duke | HB Turbo | TGM | Elliot |
| | 0.00 7,473.00 | 8,500.00 | 9,500.00 | 9,775.00 | 22,500.00 | 8,000.00 | | |
| | 0.00 3,865.00 | 5,000.00 | 7,300.00 | 8,625.00 | 14,500.00 | 4,000.00 | | |
| Generator Testing 17,000.00 | 0.00 18,100.00 | 55,000.00 | 42,900.00 | 77,040.00 | 41,760.00 | 10,120.00 | | |
| Steam Path Audit 15,000.00 | 0.00 13,200.00 | 14,000.00 | 42,300.00 | 21,300.00 | 18,000.00 | 3,000.00 | | |
| Alignment | 11,231.00 | 20,000.00 | 2,600.00 | | 8,000.00 | 4,500.00 | | |
| Technical Assistance 42,923.00 | 3.00 41,572.00 | 38,000.00 | 55,860.00 | 56,575.00 | 52,800.00 | 28,100.00 | 1 | |
| Bond Cost | | 1,650.00 | | | | | | |
| Craft Labor 34,904.00 | 4.00 44,788.00 | 28,000.00 | 40,800.00 | 34,135.00 | 80,623.00 | 28,400.00 | | |
| | | | | | | | | |
| | | | | 200 | 00000 | 70000 | 1 2 | Bid Package |

| WORKSCOPE II | | | | | | | | |
|---------------------------------------|---------------|--|------------|---------------|---------------|------------------|---------------|---|
| Weld repair & blending - 1st stage | 4,990.00 | 10,730.00 | 45,500.00 | 12,650.00 | 40,425.00 | 6,840.00 | 4,800.00 | |
| Weld repair & blending - intermediate | 4,990.00 | 5,375.00 | | 22,000.00 | 20,780.00 | 6,840.00 | 4,800.00 | |
| Weld repair & blending - diaphragms | 31,500.00 | 16,105.00 | | 68,200.00 | 11,850.00 | 13,680.00 | 65,000.00 | |
| Weld repair & blending - rotor | 3,625.00 | 10,730.00 | | 23,100.00 | 14,745.00 | 13,680.00 | 38,000.00 | |
| Balance - Turbine rotor | 3,500.00 | 11,100.00 | 20,000.00 | 9,350.00 | 20,000.00 | 16,680.00 | 1,800.00 | |
| 8" bearing x 2 | 7,400.00 | 4,464.00 | 4,400.00 | 7,700.00 | 5,200.00 | 6,440.00 | 9,000.00 | |
| 6.250" bearing x 2 | 7,000.00 | 5,064.00 | 4,400.00 | 7,700.00 | 3,800.00 | 7,160.00 | 7,600.00 | |
| thrust bearing | 2,750.00 | 4,290.00 | 2,000.00 | 5,170.00 | 4,200.00 | 2,135.00 | 3,200.00 | |
| Micro finish bearing journals | 14,800.00 | 28,420.00 | 23,000.00 | 16,720.00 | 26,000.00 | 29,820.00 | 3,600.00 | |
| Balance - generator rotor | 3,500.00 | 11,100.00 | 20,000.00 | 9,350.00 | 15,000.00 | 16,680.00 | 1,800.00 | |
| Turbine run out data | | | | 7,150.00 | 750.00 | 3,335.00 | 2,000.00 | |
| Spill Strips | 31,800.00 | 36,750.00 | 71,400.00 | 39,270.00 | 29,400.00 | 42,420.00 | 42,000.00 | |
| Stellite shields | 46,000.00 | 40,370.00 | 30,000.00 | 58,564.00 | 54,950.00 | 70,080.00 | | |
| Transportation | 5,000.00 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| WORKSCOPE II TOTAL | 166,855.00 | 184,498.00 | 220,700.00 | 286,924.00 | 247,100.00 | 236,790.00 | 183,600.00 | • |
| PACKAGE TOTAL | \$ 290,182,00 | \$ 290,182,00 \$ 324,727.00 \$ 380,850.00 \$ 488,184.00 \$ 454,550.00 \$ | 380,850.00 | \$ 488,184.00 | \$ 454,550.00 | \$ 473,973.00 \$ | \$ 269,720.00 | |
| | | | | | | | | |



Bruce E. Roth Sales Manager

January 18, 2004

Rochester Public Utilities Materials Manager 4000 East River Road NE Rochester, MN 55906-2813

Subject: SLP Unit No. 1 Turbine Generator Overhaul

PGS Quotation #2897

Power Generation Service, Inc. (PGS) is pleased to provide this quotation and have another opportunity to work with your Rochester Public Utilities' (RPU) personnel. As you know, PGS has recently provided inspection and repair services during the Silver Lake Power Plant Unit #2 and #3 turbine-generator overhauls. We believe these projects exceeded management expectations and that we delivered a cost effective and value added service for your organization. If awarded the contract for this maintenance overhaul, we know that the PGS team will again perform the job safely, with quality work, and within your outage timeframe.

As in the past, PGS will support the Unit #1 overhaul with both of our facilities and engineering support. Some additional points to keep in mind as you evaluate the quotations for the upcoming overhaul are as follows:

- PGS can provide full service project management for your outage. This includes a pre-outage meeting, parts planning and procurement support, coordination of outage vendors/contractors, specialized engineering services for inspection or repair evaluation, repair recommendations, start-up support, a post-outage meeting and the commitment of our management team to support RPU's outage needs. This single contact accountability ensures seamless project implementation resulting in superior communication, reduced project costs, and quicker return to service of your equipment.
- The Technical Field Advisors (TFA) at PGS have many years of project management and supervisory experience refurbishing Westinghouse/Siemens steam turbine-generators similar to your equipment. The person assigned to the project will have the technical expertise necessary to safely and efficiently overhaul your unit without the need to contract for additional Turbine Engineering Services. Our TFA's are also very familiar with your facility and personnel that should facilitate good communications and teamwork at your site.
- Our modern 25,000 square foot shop facility in Anoka, MN is located within a short drive of your power plant and is fully prepared for a quick turn-a-round of any equipment or parts repair. Our technicians are experienced in all aspects of steam path service and repairs including; blade ring refurbishment, nozzle partition weld repair, rotating blading replacement or "blending", stellite strip replacement, bearing inspection and re-babbitting, hydrogen seal refurbishment, and low speed balancing of the turbine and generator rotors.

- Turbine Masters, Inc., Tahlequal, OK, will perform the grit blast cleaning and non-destructive examinations at the Silver Lake Plant site. This Company has extensive experience and has earned an excellent reputation in the power generation industry throughout the country.
- Mr. Bruce Schumacher from Great Plains Technical Services, Mandan, ND will perform the generator electrical testing and inspection. Mr. Schumacher has significant experience serving the power generation industry throughout the upper Midwest and he also performed these testing and inspection services during last years Unit #2 outage.
- · PGS Technology Manager, Troy Gehrett, will perform the "opening and closing" steam path audit in conjunction with Bill Sanders Turbo-Technic Services, Aurora, Ontario, Canada. Mr. Sanders has over 40 years experience and is a nationally recognized steam path expert. He has been working with Mr. Gehrett on steam path audits for the past three years. A sample steam path audit is included for your review in Tab Section 4 of this quotation.
- E Squared Power Systems, Inc., Littleton, CO will be performing the inspection, cleaning and calibration of the regulators, current transformers, meters, and static excitation control system identified in the work scope. This Company has an excellent reputation and demonstrated field expertise in the Westinghouse Generator Control and Protections Systems for customers throughout the United States.
- In response to Technical Specification Workscope I, item 5, PGS will provide tight wire alignment equipment and supervision as part of the base quotation for Technical Assistance. As an additional option for your consideration, we are also offering weekly rental of an Electronic Radial Alignment Gauge (ERAG) unit to perform this service.

This quote is valid for one hundred twenty (120) days, unless extended in writing by the undersigned. Our quotation is conditional on acceptance of Power Generation Service Terms and Conditions of Sale or as agreed upon. Terms of payment are net thirty (30) days after schedule delivery unless negotiated otherwise.

If you have any questions please call me at 763-421-1104.

Sincerely,

Bruce Roth Sales Manager

C2: Carl Challgren – PGS Anoka Office Pat Estabrook – PGS Mandan Office

BID PACKAGE SUMMARY SHEET RE: SLP UNIT NO.1 TURBINE GENERATOR OVERHAUL

BIDDER: POWER GENERATION SERVICE, INC. QUOTATION #2897

WORKSCOPE I - Based on technical specification

| 1. Grit Blasting <i>(Floor Covering included)</i> | \$8,500.00 |
|--|------------------------|
| 2. Non-Destructive Testing (Level II Personnel) * Penetrant testing (PT) of generator retaining rings | \$5,000.00 |
| 3. Generator Testing | \$17,000.00 |
| 4. Steam Path Audit (Opening & Closing Audit) | \$15,000.00 |
| 5. Alignment ("Tight Wire" Method) | \$ Included in item #6 |
| 6. Technical Assistance | \$42,923.00 |
| 7. Craft Support | <u>\$34,904.00</u> |
| WORKSCOPE I TOTAL | \$123,327 .00 |

WORKSCOPE II - Based on technical specification

(Excludes specialty handling at the site)

A detailed repair quotation is included in this Quotation Tab section. Pricing below is the low cost option available to Rochester Public Utilities.

| option available to nothester rubile offities. | |
|---|--|
| 1. Weld repair & blending – 1st stage nozzle: On Site | <u>\$4,990.00</u> |
| 2. Weld repair & blending - intermediate nozzle: On Site | <u>\$4,990.00</u> |
| 3. Weld repair & blending - diaphragms: PGS Anoka Shop | <u>\$750.00</u> per row |
| 4. Weld repair & blending - rotor buckets: PGS Anoka Shop | \$3,625.00 |
| 5. Low speed balance - turbine rotor: PGS Anoka Shop | \$3,500.00 |
| 6. Restore bearings 1 each - 8.000" 1 each - 6.250" 1 each thrust bearing | \$3,700.00 \$3,500.00 \$2,750.00 |
| 7. Micro finish bearing journals: PGS Anoka Shop (per journal) | \$3,700.00 |
| 8. Low speed balance - generator rotor: PGS Anoka Shop | \$3,500.00 |
| 9. Turbine rotor run out data | \$ Included in items #5 & #8 |
| 10. Spill strip replacement - \$ per diaphragm * Reaction Rows 1 – 36 (PGS Anoka Shop) - Each Carrier Ring; one diaphragm stage - Each additional diaphragm stage * Reaction Rows 37 – 42 (On Site) - One diaphragm stage - Each additional diaphragm stage | \$2,850.00 \$1,650.00 \$8,750.00 \$2,900.00 |
| 11. Stellite Shield replacement – PGS Anoka Shop (per row) | \$23,000.00 per stage row |
| OPTIONS 1. Electronic Radial Alignment Gauge (ERAG) 2. Ultrasonic Testing (UT) of generator retaining rings 3. Round trip shipment of components to PGS Anoka Service Facility | \$1,200.00 per week \$3,250.00 \$2,500.00 |



1160 McKinley Street Anoka, MN 55303 United States of America (763) 421-1104 Fax # (763) 421-3451

E-mail: <u>hughessc@powergensvc.com</u>

January 18, 2005

Rochester Public Utilities 4000 E. River Road N.E. Rochester, MN 55904

Attention: Materials Manager

Re: RFQ for SLP Unit #1 Turbine Generator Overhaul

Power Generation Service, Inc. (PGS) is pleased to offer the following proposal for the above noted request. The following are clarifications of the offerings for workscope items and related costs.

WORKSCOPE II

1) Weld repair & blending – 1st stage nozzle: The cost is based on 1 PGS technician, estimated working 3 days on-site. Cost for mobilization/de-mobilization, subsistence charges, equipment rental charges, etc. have been included in the quoted amount.

FIRM PRICE QUOTE \$4,990.00

2) Weld repair & blending – intermediate nozzle: The cost is based on 1 PGS technician, estimated working 3 days on-site. Cost for mobilization/de-mobilization, subsistence charges, equipment rental charges, etc. have been included in the quoted amount.

FIRM PRICE QUOTE \$4,990.00

- 3) Weld repair & blending diaphragm: The cost is based upon 6 hours of technician work for each of the diaphragms (blade ring rows). PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: The number of blade rows requiring repair will determine the total actual cost for the work. Cost related to the shipment of the turbine components is discussed later in this quotation.)

 FIRM PRICE QUOTE \$750.00 per blade row
- 4) Straighten and dress rotor buckets: The cost is based upon an estimated 32 hours of technician work for the blade work. PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: PGS does not normally recommend weld repairs of turbine rotor blading. Cost related to the shipment of the turbine components is discussed later in this quotation.)

FIRM PRICE QUOTE \$3,625.00

5) Low speed balance – turbine rotor: The turbine rotor will be balanced in accordance with ISO Standard 1940/G2. PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: Cost related to the shipment of the turbine components is discussed later in this quotation.)

FIRM PRICE QUOTE \$3,500.00

6) Restore bearings:

1 each – 8.000" FIRM PRICE QUOTE \$3,700.00 1 each – 6.250" FIRM PRICE QUOTE \$3,500.00 1 each trust bearing FIRM PRICE QUOTE \$2,750.00

7) Micro finish bearing journals: PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: Cost related to the shipment of the turbine components is discussed later in this quotation.)

FIRM PRICE QUOTE \$3,250.00 each journal

- 8) Low speed balance generator rotor: The generator field rotor will be balanced in accordance with ISO Standard 1940/G2. PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: Cost related to the shipment of the turbine components is discussed later in this quotation.)

 FIRM PRICE QUOTE \$3,500.00
- 9) Turbine run out data: This work will be performed in concurrence with balancing operations.

 Cost is included in rotor balance work.
- 10) Spill strip replacement: Typically the spill strips (sometimes referred to as shroud tip seals) are located in the blade carrier ring(s), this would apply to 3 reaction stationary blade carrier rings. We would anticipate that there are 2 seals for each stage. Normally these are a continuous tooth held in place by a caulking strip. The tip seals for reaction stages 37 through 42 would be caulked into place directly in the turbine cylinder casing. The work for 3 reaction stationary blade carrier rings can be performed in shop and we would anticipate that is how they would be done. The work for reaction stages 37 through 42 must be done on-site. The upper shell must be assembled to allow boring bar machining of the seals to obtain proper clearance (providing there is sufficient room for the technician to safely enter the cylinder to operate the boring bar). If there is not room to accommodate this method the seals will need to be machined in each of the cylinder halves individually. We have assumed that the latter will be the case. We have broken down the cost of the work for in-shop and on-site activities. (Note: Cost related to the shipment of the turbine components is discussed later in this quotation.)

IN-SHOP - Reaction stationary blade carrier rings: Remove seal teeth (2) for diaphragm stage, install new replacement teeth, assemble carrier ring, machine seal teeth to required dimension, disassemble carrier ring and de-burr seal teeth.

\$2,850.00 EACH CARRIER RING

Each additional stage of seal teeth replaced will be charged at \$1,650.00

ON-SITE - Reaction Rows 37-42: Remove seal teeth (2) for diaphragm stage, install new replacement teeth, set up boring bar on ½ shell, machine seal teeth to required dimension, remove boring bar and set on other ½ shell, machine teeth to required dimension, remove boring bar and de-burr seal teeth.

\$8,750.00 for one diaphragm stage
Each additional stage of seal teeth replaced will be charged at \$2,900.00

11) Stellite Shield replacement: We have estimated 100 shields for L-0 blade row 42, and 100 shields for the L-1 blade row 41, each shield approximately 6 "in length, and "J" type configuration. PGS anticipates that the work will be performed at its Anoka, MN repair facility. (Note: Cost related to the shipment of the turbine components is discussed later in this quotation.)

FIRM PRICE QUOTE \$23,000.00 PER STAGE ROW

Trucking related costs: Round trip shipment of turbine/generator components to PGS repair facility and return to SLP will be \$2,500.00 (each occurrence), exclusive of specialty handling at the site.

In the case additional work is identified during the inspection process, PGS will either provide quoted pricing or perform the work on a time, material, and equipment rental basis, as further agreed upon by the parties. (See attached PGS repair group Time, Material, and Equipment Rental rate sheets).

If you have any questions or require further information with regard to this or other matters please contact us.

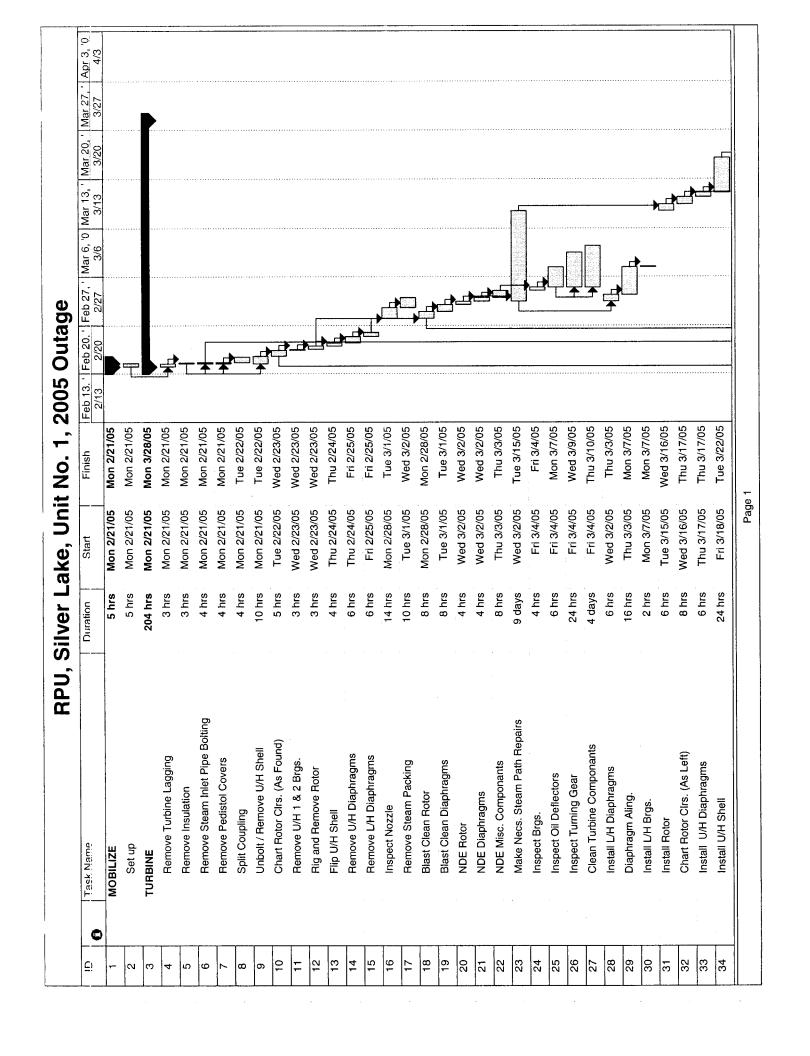
Sincerely,

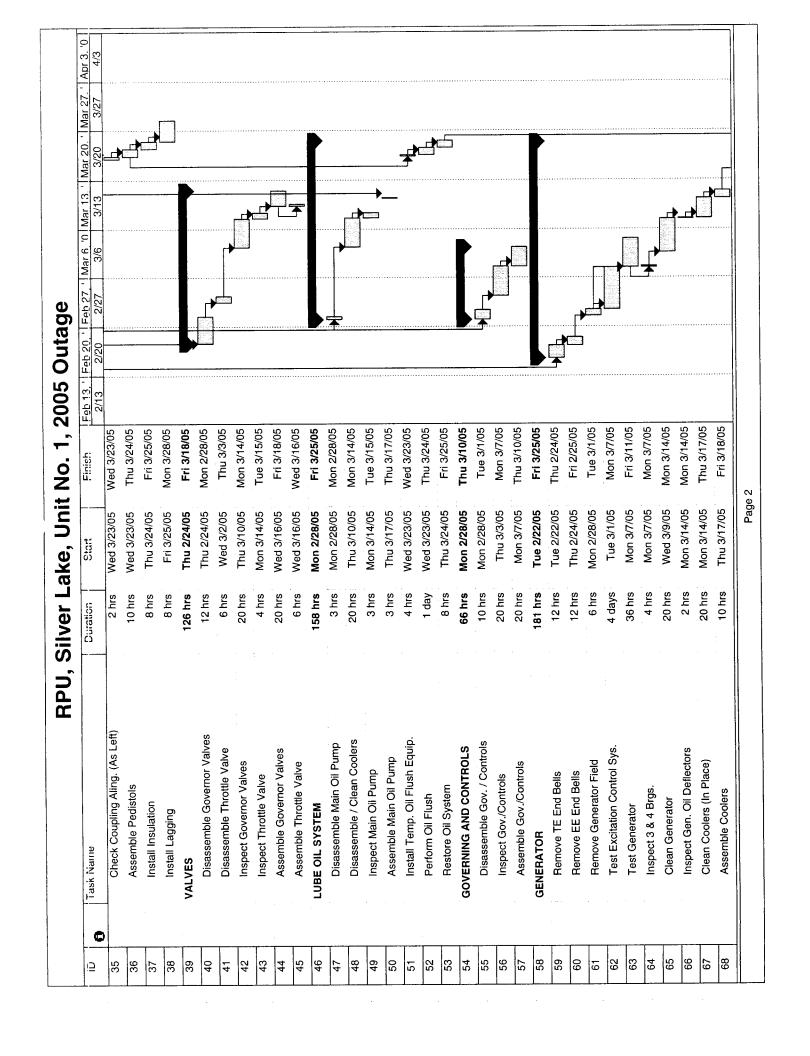
Scott Hughes Customer Service Manager Power Generation Service

ACKNOWLEDGMENT OF CORPORATION

AUTHORIZED SIGNATURE

| STATE OF MINNESO | ATC | |
|-----------------------|--------------------------|---|
| COUNTY OF ANOI | ζ Α | |
| | | |
| On this | 5TH day of JANU | ARY 20 05, before me appeared |
| MR. CARL CHA | LLGREN | to me personally known, who, being |
| (name of officer) | | |
| by me duly sworn did | say that he/she is the _ | PRESIDENT/CEO of |
| | ION SERVICE, INC. | (title) a corporation: and that said instrument was |
| executed in behalf of | said corporation by auth | nority of its Board of Directors; and that |
| said MR. CARL C | HALLGREN : | acknowledged said instrument to be the free |
| act and deed of said | corporation. | |
| | | |
| | | |
| | | Notary Public//lanich//de/ |
| | | County |
| | | My Commission Expires |
| | | MELANIE L. MARTY NOTARY PUBLIC - MINNESOTA My Commission Expires Jan 31, 2005 |





| Took Nance Duration Start Finish Feb 13, Feb 201 Feb 27 Mar 20, Mar 73 Mar 20, Mar | ir 20, ' Mar 27, ' Apr 3, '0 3/20 3/27 4/3 | | | L | | 4 3/29 |
|--|---|---------------|-------------------|-------------|----------------------|---------------|
| Duration Start Finish | 7, ' Mar 6, '0 Mar 13, ' Mar 7 3/6 3/13 3 | | | | | |
| Field 6 hrs Mon 3/21/05 End Bells 25 hrs Tue 3/22/05 I'urning Gear 12 hrs Fri 3/25/05 I Line 0 hrs Tue 3/29/05 1 Line 0 hrs Tue 3/29/05 | | | ri 3/25/05 | e 3/29/05 | e 3/29/05 | e 3/29/05 |
| Task Namc Install Field Install End Bells START UP Unit on Turning Gear Unit On Line | Start | Mon 3/21/05 | Tue 3/22/05 | Fri 3/25/05 | Fri 3/25/05 | Tue 3/29/05 |
| | Task Name | Install Field | Install End Bells | START UP | Unit on Turning Gear | Unit On Line |



Power Generation Service, Inc.

1160 McKinley St. Anoka, MN 55303 (763)421-1104 Phone (763)421-3451 Fax

January 18, 2005

Subject: Rochester Public Utilities Silver Lake Plant Unit #1

The following is a quotation for performing opening and closing steam path audits during the major inspection on steam turbine-generator unit #1. The audit will include calculations of all losses due to leakage, erosion, deposits, and mechanical damage as well as document the as found and as left condition of the complete steam path. The audit will also reflect possible structural issues as well as repair recommendations.

Item #01:

Opening and Closing Steam Path Audit

Perform opening and closing steam path audits of the complete steam path during the major inspection on steam turbine-generator unit #1. Present all findings to the customer in the form of a preliminary report, which will be made available shortly after completion of the initial audit, and a final report. The preliminary report will highlight immediate repair concerns and general as found loss calculations. The final report will include summaries of all losses in terms of kilowatt, fuel cost per annum, and heat rate penalty and how they compare with pre-outage test results as well as a detailed breakdown of the as found and as left condition of each steam path element. The final report will also include a complete color photographic record of the as found and as left condition of each steam path element.

Firm Price:

\$15,000.00

Prior to the onsite data collection, information will be required from the customer for analysis purposes. This data includes a full load heat balance, cross section drawing of the unit, per annum fuel costs, and hours of operation per year. Enclosed is a sample copy of a recent sample steam path audit report for your review. If you have any questions regarding this quotation please feel free to contact me at your convenience.

Regards,

Troy W. Gehrett Technology Manager



Power Generation Service, Inc.

Millwright Division 2719 37th ST. N. W. MANDAN, ND 58554 (701-663-6736)

TECHNICAL FIELD ASSISTANT

EFFECTIVE JULY 1, 2004

S. T. \$ 128.00 PER HOUR

O. T. \$ 192.00 PER HOUR

JOB REPORTS:

\$ 88.00 PER HR.

TRAVEL TIME: MINIMUM 8 HOURS

\$ 88.00 PER HR.

MOTELS and MEALS:

\$ 165.00 PER DAY

RENTAL VEHICLES:

COST + 10%

MILEAGE: SMALL TRUCK

\$ 70.00 PER DAY

AIR FARE:

COST + 10%

^{*} MILEAGE RATE IS SUBJECT TO CHANGE REFLECTING RISING FUEL COSTS.

MILLWRIGHT DIVISION 2719 37TH ST NW MANDAN, ND 58554 (701)663-6736

TIME AND MATERIAL HOURLY RATES

RATES EFFECTIVE 5/1/04 - 4/30/05

| SHIFT | | <u>1ST</u> | 2ND | 3RD |
|------------|------|---|-----------|-----------|
| FOREMAN | S.T. | \$ 68.12 | \$ 68.94 | \$ 68.94 |
| | О.Т. | \$ 95.72 | \$ 96.96 | \$ 96.96 |
| | P.T. | \$ 123.33 | \$ 124.97 | \$ 124.97 |
| | | 기 등 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 | | |
| JOURNEYMAN | S.T. | \$ 64.82 | \$ 65.64 | \$ 65.64 |
| | О.Т. | \$ 90.77 | \$ 92.01 | \$ 92.01 |
| | P.T. | \$ 116.73 | \$ 118.37 | \$ 118.37 |

OVERTIME "O.T." OVER 8 HOURS PER DAY STANDARD SHIFT AND SATURDAY DOUBLE-TIME "P.T." SUNDAYS AND HOLIDAYS

ALL MILLWRIGHTS EMPLOYED BY PGS ARE ENTITLED TO THE WAGES, BENEFITS AND CONDITIONS OF THE LOCAL AGREEMENT WHICH PGS IS SIGNATORY TO. LCCAL 548 - MINNESOTA

MILLWRIGHT DIVISION 2719 37TH ST NW MANDAN, ND 58554 (701) 663-6736

TIME AND MATERIAL RATES

TRAVEL * \$60.00 PER HOUR / FOREMAN / SUPT

* \$50.00 PER DAY / PER PERSON

MILEAGE * \$00.50 PER MILE / PER PERSON

AIRFARE * COST + 10%

RENTAL VEHICLE * COST + 10%

MOTEL * COST + 10%

*Mileage rate subject to change reflecting rising fuel costs

*Mileage rate subject to change reflecting rising fuel costs

MATERIALS * COST + 20%

SHIPPING * COST + 10%

SUBCONTRACTORS * COST + 10%



1160 McKinley Street Anoka, MN 55303 United States of America (763) 421-1104 Fax # (763) 421-3451

TIME AND MATERIAL RATES

EFFECTIVE: July 1, 2004 TURBINE TECHNICAL REPAIR DIVISION

Confidential Quotation # 2897

DATED: January 18, 2005

LABOR RATES

| | STRAIGHT TIME | OVER TIME |
|---------------------------|------------------|--------------|
| TECHNICIAN | \$ 97.00 | \$145.50 |
| WORK LEADER TECHNICIAN | \$110.00 | \$165.00 |
| SUPERVISOR | \$128.00 | \$192.00 |
| TECHNICAL FIELD ASSISTANT | \$128.00 | \$192.00 |
| CRAFTSMAN | \$ 88.00 | \$132.00 |

Note: SPECIALIZED ENGINEERING QUOTED UPON REQUEST

STRAIGHT TIME:

1st 8 hours Monday through Friday

OVER TIME:

Over 8 Monday through Friday / All hours Saturday, Sunday, and Holidays

PRIORITY SERVICE:

Priority Service to satisfy urgent needs and which cause

disruption to PGS normal manufacturing and production

process:

30% of labor charge

TRAVEL TIME:

To and from job site:

Monday through Friday, Regular Shift .:

\$ 85.00/hr

Saturday, Sunday, Holidays &

Travel done after having worked or traveled

longer than an 8 hour shift:

\$ 100.00/hr

PER DIEM:

\$165.00/day

SHOP SUPPLIES:

Rags, gases, degreaser, lubricants,

gloves, shields, expendables; & etc.;

Environmental and hazardous waste fees:

4.75% of labor charge

1

TIME AND MATERIAL RATES

TURBINE TECHNICAL REPAIR DIVISION Page 2 of 2

MATERIALS: Including abrasives, burrs, sand

blasting material, welding rod, metals,

purchased parts and services, & etc.; Cost + 20%

SHIPPING & TRANSPORTATION: Cost + 10%

SHOP VEHICLES: Used for travel to and from site

and/or delivery of parts;

Fuel surcharge will be applied Small truck- \$70.00/day + .70/mile\$ as required: Large truck- \$92.00/day + \$1.10/mile\$

RENTAL VEHICLES: Cost + 10%

AIR FARE: Cost + 10%

EOUIPMENT RENTAL OF COMPANY EQUIPMENT: Per equipment rental list

EQUIPMENT RENTAL OF OTHER EQUIPMENT: Cost + 10%

TIME AND MATERIAL RATE CLARIFICATIONS

- * Minimum billing is \$500.00. Minimum billing for on-site work will be four (4) hours for each worker including travel and work time regardless of actual time worked. Over four (4) hours up to eight (8) hours will be billed at eight (8) hours.
- * Travel time is added to work time to determine when overtime or premium time begins. The day of the week a shift starts determines whether it is a Monday through Friday, Saturday, etc. shift.
- * There shall be a work leader assigned for each shift of 1 to 4 employees in each work specialty, i.e.; welding, machining, etc. There shall be an additional work leader assigned for each additional 1-4 employees per shift per work specialty. There shall be a shift supervisor assigned for each shift on which there are nine (9) or more employees.
- * Supervisors time shall be allocated to each job based on actual time devoted to engineering work, scope definition, methods determination, quality control, and specialized labor on the job.
- * Any delays not caused by, or beyond the control of PGS, will be charged at the above Time and Material rates.
- * For each day a person is on-site (or in shop for "DEDICATED RESOURCE PROJECTS") performing or available to perform, "Time and Material" work, a minimum of eight hours shall be charged.
- * If the work situation does not allow a full eight consecutive hours of rest time after a period of twelve hours of combined work and travel has been accomplished, the hours worked after the shortened rest period will be charged at the Premium time rate.

When PGS personnel working on a quoted project are requested by the Customer to also perform work on a Time and Material project a separate time record will be maintained. Applicable per diem or expenses will be charged on a daily basis if personnel work in excess of one half day on the Time and Material project.

RG#106 2



Standard Clarifications and Exceptions - Quote #2897

Turbine Generator Inspection and Overhaul Service

NOTE: In all cases, extra work based upon the following Clarifications and Exceptions will be mutually agreed upon by PGS and the Customer prior to commencing the work.

- 1. The Firm Price Bid is for disassembly and reassembly of the turbine-generator, valves and motors under established industry and normal practices.
- 2. In the event special or extraordinary means such as drilling, boring, cutting, grinding or disintegration is required to remove stuck or "frozen" parts, the work will be performed on a extra work, time and material basis.
- 3. Should similar special or extraordinary means including specialized fitting or machining be required to install existing, replacement or refurbished parts supplied by the Customer, the work will be performed on an extra work, time and material basis. Customer will supply all replacement seal strips, gaskets and parts.
- 4. Routine repairs as they relate to the "Open, Clean & Close" portion of this proposal are defined as replacing defective or worn parts with Customer supplied new or reconditioned parts.
- 5. Should demobilization or significant crew schedule changes are required due to repairs, refurbishments or job extension by others, the work and demobilization costs will be performed on an extra work, time and material basis.
- 6. Assisting other Contractors other than PGS subcontractors will be performed on an extra work, time and material basis unless this work has been identified in the work scope.
- 7. Insulation replacement and repair if required, will be performed on an extra work, time and material basis.
- 8. Outside crane services, if required, will be at "Time and Material" rates or cost +10%.
- 9. All extra work performed by subcontractors, that is not specified in the Technical Specifications, will be done at the subcontractor's current "Time and Material" rates +10%.
- 10. Compressed air and electrical power requirements for the grit-blast cleaning will be provided by RPU.
- 11. Non-destructive testing (NDT) will be performed by Level II technicians.

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

| KNOW ALL MEN BY THESE PRESENTS, 1160 McKinley Street | that we POWER GENERATION SERVICE, INC. (Here insert full name and address or legal title of Contractor) |
|--|---|
| Anoka, MN 55303 | TTED STATES FIDELITY AND GUARANTY COMPANY |

as Principal, hereinafter called the Principal, and UNITED 385 Washington Street

St. Paul, MN 55102

a corporation duly organized under the laws of the State of Maryland as Surety, hereinafter called the Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

(Here insert full name and address or legal title of Surety)

CITY OF ROCHESTER, MN

as Obligee, hereinafter called the Obligee, in the sum of

- FIVE PERCENT OF TOTAL AMOUNT OF BID -

Dollars (\$ 5%

).

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

(Here insert full name, address and description of project)

SLP UNIT NO. 1 TURBINE GENERATOR OVERHAUL ROCHESTER, MN

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

| Signed | and | sealed | this |
|--------|-----|--------|------|
|--------|-----|--------|------|

18TH

day of

JANUARY

2005

| Signed and sealed this | |
|------------------------|---|
| Mulanie Mary (Witness) | POWER GENERATION SERVICE, INC. (Seal) (By: A F CHAILBELL President & CEC |
| MULL COST | UNITED STATES FIDELITY AND GUARANTY COMPANY (Seal) John E. Tauer (Title) Attorney-in-Fact |

AIA DOCUMENT A310 · BID BOND · AIA ® · FEBRUARY 1970 ED · THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 N.Y. AVE., N.W., WASHINGTON, D. C. 20006

ACKNOWLEDGMENT OF CORPORATION

| State of MINNESOTA) |
|---|
|) ss. On this 18th day of January 20 05 |
| County of Ahoha) before me appeared (and F. Challgren |
| to me personally known, who, being by me duly sworn, did say thathe |
| is_thePresident & CEO |
| of POWER GENERATION SERVICE, INC. |
| a corporation, that the seal affixed to the foregoing instrument is the |
| corporate seal of said corporation, Power Generation Service, The |
| (If no seal, so state, and strike out above as to corporate seal) |
| and that said instrument was executed in behalf of said corporation by |
| authority of its Board of Directors; and that said |
| acknowledged said instrument to be the free act and deed of said |
| corporation. |
| Milani Ilhai L |
| Notary Public County, |
| MELANIE L. MARTY |
| NOTARY PUBLIC - MINNESOTA My Commission Expires Jan 31, 2005 |
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| |
| ACKNOWLEDGMENT OF CORPORATE SURETY |
| |
| State of MININESOTA \ |
| State of MINNESOTA)) ss. On this 18th day of January 2005 |
| County of HENNEPIN) before me appeared John E. Tauer |
| to me personally known, who, being by me duly sworn, did say that he |
| is the Attorney-in-Fact |
| of UNITED STATES FIDELITY AND GUARANTY COMPANY a |
| corporation, that the seal affixed to the foregoing instrument is the |
| corporate seal of said corporation and that said instrument was executed |
| in behalf of said corporation by authority of its Board of Directors; and |
| that said John E. Tauer |
| acknowledged said instrument to be the free act and deed of said |
| corporation. |
| Music Olsm |
| TWO Y WANY |
| NICOLE OLSON Notary Public County, |
| NOTARY PUBLIC-MINNESOTA My Commission expires My Commission expires |
| 5 |



RESOLUTION

| BE IT RESOLVED by the Public Utility Board of the City of Rochester, Minnesota, to reject the bid package from HB Turbo for non-compliance with all of the terms of the bid specifications. |
|---|
| BE IT FURTHER RESOLVED by the Public Utility Board to approve a purchase order agreement with Power Generation Services, Inc., for |
| Silver Lake Plant Unit 1 Turbine Generator Overhaul |
| The amount of the agreement not to exceed TWO HUNDRED FIFTY THOUSAND AND NO/100 (\$250,000.00) and Power Generation Services, Inc. being lowest responsible bidder. |
| Passed by the Public Utility Board of the City of Rochester, Minnesota, this 24 th day of January, 2005. |
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| President |

Secretary