

COUNCIL ACTION FORM

**SUBJECT: POWER PLANT UNIT 8 TURBINE GENERATOR OVERHAUL
PROJECT – AWARD OF CONTRACT**

BACKGROUND:

On June 23, 2020, the City Council approved plans and specifications for the Unit 8 Turbine Generator Overhaul Project. The Unit 8 Turbine Generator is scheduled to be disassembled, inspected, and repaired at the same time as the Unit 8 Boiler Repair Project. This work is required to replace worn parts and inspect the turbine and generator for repairs that may be needed to prevent unplanned turbine/generator outages, prevent costly turbine/generator damage, and increase turbine/generator reliability.

Repairs and replacement of worn parts will be completed as the inspection progresses. Experience has shown that certain parts require replacement every major overhaul and some parts become unusable during the disassembly process. This overhaul and parts replacement are required and recommended by boiler and machinery insurance carriers and follows accepted industry standards. **This bid is for labor and materials for the inspection and repairs on Unit 8 Turbine Generator. The spare parts that are made available to the contractor for this repair are bid under a separate contract.**

Bid documents were issued to sixty-seven firms and five plan rooms. The bid was advertised on the Current Bid Opportunities section of the Purchasing webpage and a Legal Notice was published on the websites of a contractor plan room service with statewide circulation and the Iowa League of Cities.

On August 12, 2020, seven bids were received as shown on the attached report. These bids were reported to City Council on August 25, 2020. Award of contract was delayed in order to allow sufficient time for evaluation in order to recommend an award that best meets the City's needs.

Staff reviewed the bids received and determined that lowest responsive, responsible bidder, Blade Runner Turbomachinery Services, LLC of Navasota, TX, is qualified to perform the necessary work and has the capacity to complete the project within the timeframe required. Blade Runner's base bid is in the amount of \$630,000. This vendor is not licensed to collect taxes for the State of Iowa. Therefore, the City of Ames will pay applicable sales tax directly to the State of Iowa.

Blade Runner has included optional pricing for a Turbine Lube Oil System High Speed Flush for the Unit 8 turbine lube oil system in the amount of \$69,800, Alternate #10. Due to the plant's recent history with foreign material intrusion and oil particulates causing unforeseen plant outages, staff supports including this option in the contract.

The Engineer's estimate for the cost of the total project is \$2,488,000.

The approved Capital Improvements Plan includes the following funding for the Unit 8 Turbine Generator Overhaul.

2019/20 Materials/Parts	\$1,000,000
2019/20 Construction	\$1,650,000
2019/20 GE Tech Support	\$ 350,000
TOTAL	\$3,000,000

Contracts awarded to date on this project are:

Argo (parts -City to pay sales tax)	\$1,077,109.00
Sales tax	\$ 74,711.63
MD&A (parts- sales tax included)	\$ 148,606.16
Power Plant Services (parts- sales tax included)	\$ 139,388.20
Burns & McDonnell (engineering) -	\$ 41,000.00
Blade Runner (this Council Action Form) -	\$ 699,800.00
TOTAL	\$2,180,614.99

ALTERNATIVES:

1. Award a contract to Blade Runner Turbomachinery Services, LLC, of Navasota, TX for the Unit 8 Turbine Generator Overhaul Project for base bid plus Alternate #10 in the amount of \$699,800.
2. Award a contract to one of the other bidders.
3. Reject all bids and direct staff to rebid.

CITY MANAGER'S RECOMMENDED ACTION:

This contract is necessary to complete an overhaul of Unit 8 Turbine-Generator. It is crucial to obtain parts and perform this work in a timely fashion in order to maintain the reliability of Unit #8.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative #1 as stated above.

BIDDER:	ITB 2020-114 UNIT 8 TURBINE GENERATOR OVERHAUL BID SUMMARY						
	HPI, LLC Houston, TX	ST Cotter Turbine Services, Inc Clearwater MN	GE, Windsor, CT	Blade Runner Turbomachinery Services, LLC Navasota, TX	MD&A Latham, NY	Power Plant Services Melrose Park, IL	Elliott Company Jeannette, PA
BASE BID:							
Supply all materials, labor, and equipment to perform steam turbine generator major overhaul including the replacement of parts, inspection and repairs necessary for Unit 8 Turbine Generator as specified in the Invitation to Bid 2020-114 documents for the following lump sum amounts of:	\$1,253,108.00	\$1,231,525.00	\$999,983.00	\$630,000.00	\$922,737.00	\$1,698,475.00	\$656,964.00
Sales and/or Use taxes included in the amount above	\$74,812.00	\$92,364.38	\$0.00	\$0.00	\$43,679.00	\$0.00	\$0.00
ALTERNATE No. 1:							
Major Repair of First Stage Nozzle Parts:	\$11,208.00	\$21,555.00	\$32,265.00	\$9,800.00	\$12,626.00	\$19,360.00	\$30,274.00
ALTERNATE No. 2:							
Major Repair of First Stage Deflector:	\$18,761.00	\$23,400.00	\$15,305.00	\$13,500.00	\$28,910.00	\$22,000.00	\$18,600.00
ALTERNATE No. 3:							
Pull Turbine nozzle and perform major repair. Nozzle surface shall be machined to ensure proper fit:	\$62,302.00	\$69,300.00	\$10,189.00	\$32,000.00	\$52,596.00	\$95,985.00	\$22,450.00
ALTERNATE No. 4:							
Major Repair of Second thru Fifth Stage Diaphragms (Stationary Blades):	\$59,238.00	\$108,095.00	\$45,975.00	\$59,800.00	\$18,429/diaphragm	\$92,125.00	\$156,416.00
ALTERNATE No. 6:							
Provide Two (2) On-Site Turbine Specialist during Outage	Included in base bid	\$181,470.00	\$378,180.00	\$91,400.00	\$149,800 each	\$294,652.00	\$287,838.00
ALTERNATE No. 7							
Provide One (1) On-Site Generator Specialist during Outage	Included in Gen Testing Scope	\$52,550.00	See note 4	\$104,000.00	\$3,210/shift	\$198,462.00	\$91,000.00
ALTERNATE No. 8:							
Repowering and Boring (re-pour Babbitt) of Four Main Shaft Journal Bearings:	\$16,125.00	\$40,454.00	\$45,000.00	\$24,000.00	\$37,900.00	\$67,645.00	\$49,950.00
ALTERNATE No. 9:							
Turbine Rotor Low Speed Spin Balance	\$8,193.00	\$6,800.00	\$9,826.00	\$7,900.00	\$18,500.00	\$28,750.00	\$25,040.00
ALTERNATE No. 10:							
High Speed Turbine Lube Oil Flush	\$61,019.20	\$9,950.00	\$180,149.00	\$69,800.00	\$53,206.00	\$148,758.00	\$79,992.00
ALTERNATE No. 11:							
High Speed Turbine Balance Test	\$45,334.00	\$68,600.00	\$44,937.00	\$58,000.00	\$68,500.00	\$32,000.00	\$54,000.00
GRAND TOTAL	\$1,535,288.20	\$1,813,699.00	\$1,761,809.00	\$1,100,200.00	\$1,194,975.00	\$2,698,212.00	\$1,472,524.00
Alternate Pricing Offered:							
HPI - Base bid without ISO Phase Bus Duct Cleaning	\$1,133,145.00						
Option 1 Shop Blast and Inspect per Addenda 3 Question 50	\$32,639.00						
Option 2 Section 485961 D Line 5 Diaphragm Inserts	\$23,873.00						
GE Alternate No. 6A - Provide one on-site Turbine Specialist during outage			\$170,370.00				
GE Alternate No. 12 - Install new inserts for Diaphragm sealing			\$22,151.00				
GE Alternate No. 13 - Control valves seat replacement			\$68,935.00				
GE Alternate No. 14 - Replace main stop valve upper and lower PSH Bushings			\$23,209.00				
GE Alternate No. 15 - Dynamic Frequency Response Test			\$22,018.00				
GE Alternate No. 16 - Rotor Transportation			est. \$35,000				
GE Alternate No. 17 - Diaphragms/Nozzle shipping to shop for repair			cost+15%				
GE Alt #1-Base bid working 6x10 hr schedule			\$936,033.00				
GE Alt #2-Generator Test & Inspect			\$25,343.00				
GE Alt #2 - Startup Specialist (2daysx10 hr days)			\$20,448.00				
GE Alt #3-Exciter Specialist (4daysx10hr days)			\$30,672.00				
GE Alt #4 - Performance Bond			\$5,961.00				

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Elliott Company Option for 1 Tech Rep							\$139,950.00
Alternate or Additional Pricing Proposed							