

COUNCIL ACTION FORM

SUBJECT: POWER PLANT FUEL CONVERSION – TURBINE CONTROL SYSTEMS (TCS) ON UNITS 7 AND 8 – REPORT OF BIDS

BACKGROUND:

In November 2013 the City Council voted to convert the City's Power Plant from coal to natural gas. Implementing this decision requires a significant amount of engineering, installation of equipment, and modification and construction in the Power Plant.

On January 13, 2015, City Council approved preliminary plans and specifications for the Turbine Controls System. **This specific phase of the conversion project is to purchase new Turbine Control Systems (TCS) for both Unit 7 and Unit 8. Additionally, the steam seal regulator on Unit 8 is to be replaced.**

Bid documents for this project were issued to ten companies. The bid was advertised on the Current Bid Opportunities section of the Purchasing webpage and a legal notice was published in the Ames Tribune. The bid was also sent to one planroom. The Engineer's estimate of the cost for this phase of the project is \$1,064,728.

On February 25, 2015, four bids were received as shown on the attached report. The specifications and bids are quite complex, and Electric Services staff feels that additional time is needed to evaluate each bid in order to recommend an award that best meets the City's needs.

The approved FY 2014/15 Capital Improvements Plan for Electric Services includes \$36,880,000 for the Unit #7 and #8 Fuel Conversion. This amount includes \$2,000,000 for engineering and \$34,880,000 for equipment and installation.

ALTERNATIVES:

1. Accept the report of bids and delay award for the Turbine Control System.
2. Award a contract to the apparent low bidder.
3. Reject all bids and direct staff to rebid.

MANAGER'S RECOMMENDED ACTION:

Staff needs additional time to fully evaluate the bids before recommending action by the City Council. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.



2015-133 Turbine Control System Bid Summary

BIDDER:

**GE Energy Control Solutions, Inc
Longmont, CO**

**HPI-LLC
Houston, TX**

**Schneider Electric
Houston, TX**

**Emerson Process Management Power & Water Solutions, Inc.
Pittsburgh, PA**

BID NO. 1 TURBINE CONTROL SYSTEM

1	FIRM PRICE for Turbine Control System (TCS) and appurtenances, as specified in Specification C-2401, subdivided as follows:	\$814,920.00	\$953,973.00	\$997,185.00	\$1,400,337.12
1.a*	Subtotal Hardware and Software (Items 1.2 and 1.3) - *EMERSON ADD				\$767,416.00
1.b*	Hardware Tax (7%) - *EMERSON ADD				\$53,719.12
1.c*	Subtotal Labor (Items 1.1, 1.4 and 1.5) - *EMERSON ADD				\$579,202.00
1.1	ENGINEERING, PROGRAMMING, GRAPHICS AND PROJECT MANAGEMENT	\$278,006.00	\$103,726.00	\$387,285.00	\$447,327.00
1.1.1	Unit 7 TCS Programming and Configuration	\$120,026.00	\$21,793.00	\$240,550.00	Included
1.1.2	Unit 7 TCS Graphics Configuration	\$24,502.00	\$17,670.00	Included	Included
1.1.3	Unit 8 TCS Programming and Configuration	\$114,023.00	\$21,793.00	\$124,085.00	Included
1.1.4	Unit 8 TCS Graphics Configuration	\$19,455.00	\$17,670.00	Included	Included
1.1.5	Project Management and Administration	Included	\$24,800.00	\$22,650.00	Included
1.2	TURBINE CONTROL SYSTEM				
1.2.1	Total TCS Hardware	\$393,624.00	\$755,780.00	\$564,900.00	\$721,666.00
1.2.2	Unit 7 TCS Hardware, Software, Workstations and accessories	\$99,316.00	\$305,490.00	\$234,910.00	\$200,596.00
1.2.3	Unit 8 TCS Hardware, Software, Workstations and accessories	\$91,613.00	\$312,467.00	\$231,995.00	\$177,166.00
1.2.4	TCS Software Licensing and Upgrades for one year per Specification C-2402.	Included	Included Above	\$7,075.00	Included
1.2.5	Low Fidelity Simulator per Specification C-2402, Section 613.1	\$49,224.00	Included Above	\$4,995.00	\$66,797.00
1.2.6	TCS Spare Parts for start-up and Special Tools per Specification C-2402	N/A	\$12,485.00	\$9,135.00	\$33,325.00
1.2.7	Steam Turbine Front Standard Mechanical-Hydraulic Control Replacement Mechanical Equipment (Steam Turbine Inlet Control Valve)	\$151,370.00	\$120,038.00	\$73,290.00	
1.2.7*	Steam Turbine Front Standard MHC Replacement to EHC CV and Mechanical Upgrades - *EMERSON ADD				\$100,730.00
1.2.8*	OSC and AMS Solutions - *EMERSON ADD				\$138,052.00
1.2.9	Freight	\$2,101.00	\$5,300.00	\$3,500.00	\$5,000.00
1.3	TECHNICAL FIELD ASSISTANCE (TFA)	\$104,989.00	\$67,852.00	\$45,000.00	\$64,480.00
1.3.1	Number of working days included in the above TFA price	40	30	35 (280 Hours)	400 hours
1.3.2	Price per work day in excess of the TFA time included above	See Rate Sheet	\$2,150.00	\$1,225.00	
1.3.2*	Price per eight (8) straight hours in excess of TFA (Technical Direction) time included above- *EMERSON ADD				\$1,593 / 8 hours + travel & living
1.3.2a*	Price per eight (8) straight hours in excess of THA (Tuner) time included above- *EMERSON ADD				\$2,145 / 8 hours + travel & living
1.3.3	Number of round trips to the Project Site included in the above TFA price	4	2	3	8
1.3.4	Price per round trip in excess of trips included above	See Rate Sheet	\$3,350.00	\$770.00	Billable At Cost/Trip
1.4	ON SITE TRAINING	\$38,301.00	\$26,615.00	\$0.00	\$67,395.00
1.4.1	Total cost for On Site Operator Training (up to 20 people)	\$19,401.00	\$17,743.00	Included in previous bid	\$56,603.00
1.4.2	Total cost for Technician Training at Supplier's office (up to 6 people)	\$18,900.00	\$8,872.00	Included in previous bid	\$10,792.00
1.4.3	Number of days included in the above Operator Training price	2	6	0	10
1.4.4	Number of days included in the above Technician Training price	5	3	N/A	60
1.4.5	Number of round trips to the Project Site included in the above Operator Training price	1	0	N/A	2
1.4.6	Price per round trip in excess of trips included above	N/A	\$3,350.00	N/A	Billable At Cost/Trip
1.4.7	Price per one (1) additional week of On Site Operator Training	N/A	\$6,000.00	N/A	\$17,386 / week
2	OPTIONS				
2.1	Spare Parts (Recommended for 5 years) per Specification C-2402, Section 111	\$88,820.00	\$98,350.00	\$76,110.00	\$41,498.00
2.2	High Fidelity Simulator per Specification C-2402, Section 613.2	Discussion needed to price	\$22,458.00	\$26,670.00	\$196,784.00
2.3	Cost to extend warranty to two (2) years (including software upgrades and licensing fees) after Owner acceptance and release of retention	\$9,739.00	\$49,640.00	\$37,780.00	\$39,052.00
2.4	Cost to extend warranty to three (3) years (including software upgrades and licensing fees) after Owner acceptance and release of retention	\$16,231.00	\$120,925.00	\$39,155.00	\$78,103.84
2.5	Monthly cancellation charges - BASE BID:	See GE Proposal for schedule	Schedule attached under TAB 4		See cancellation schedule

3	ADD / DELETE PRICING				ADD / DELETE
3.1	Price to add or delete one (1) PC-based Operator workstation with dual LCD monitors and all accessories	\$49,922.00	\$11,350.00	\$4,400.00	\$5,829 / \$5,199
3.2	Price to add or delete one (1) PC-based Operator workstation with single LCD monitor and all accessories	\$49,007.00	\$10,500.00	\$4,120.00	\$5,170 / \$4,597
3.3	Price to add or delete one (1) PC-based Engineering workstation with single LCD monitor and all accessories	\$49,007.00	\$19,400.00	\$4,575.00	\$8,523 / \$7,662
3.4	Price to add or delete a Redundant Processing Unit or Process Controller (excluding I/O)	\$10,200.00	\$5,000.00	\$7,800.00	\$22,164 / \$19,948
3.5	Price to add or delete isolated 4-20 mA (with HART), RTD or thermocouple inputs in groups of 8	TBD, during project	\$1,200.00	\$615.00	\$326 / \$298
3.6	Price to add or delete isolated RTD or thermocouple inputs in groups of 8	TBD, during project	\$1,200.00	\$805.00 - FBM202 / \$535.00 - FBM203	
3.6*	Price to add or delete isolated RTD - *EMERSON ADD				\$239 / \$219
3.6a*	Price to add or delete isolated thermocouple- *EMERSON ADD				\$208 / \$190
3.7	Price to add or delete 4-20 mA dc outputs in groups of 8	TBD, during project	\$1,725.00	\$630.00	\$217 / \$198
3.8	Price to add or delete digital inputs in groups of 16 (dry contact)	TBD, during project	\$375.00	\$540.00	\$117 / \$107
3.9	Price to add or delete digital inputs in groups of 16 (field wetted contact)	TBD, during project	\$614.00	\$730.00	\$170 / \$155
3.10	Price to add or delete digital outputs in groups of 8 (solid state outputs)	TBD, during project	\$358.00	\$545.00	N/A
3.11	Price to add or delete digital outputs in groups of 8 (electromechanical relay outputs)	TBD, during project	\$725.00	\$545.00	
3.11*	Price to add or delete digital outputs (electromechanical relay outputs) - G2R 1 Form C - *EMERSON ADD				\$308 / \$281
3.11a*	Price to add or delete digital outputs (electromechanical relay outputs) - G2R 1 Form C - *EMERSON ADD				\$377 / \$345
3.12	Price to add or delete a pulsed input card	TBD, during project	\$774.00	\$405.00	\$257 / \$235
3.13	Price to add or delete a ETHERNET interface card for MODBUS TCP/IP or OPC datalinks	TBD, during project	\$2,257.00	\$2,200.00	N/A
3.14	Price to add or delete a MODBUS serial interface card	TBD, during project	\$2,474.00	\$1,590.00	\$211 / \$193
3.15	Price to add or delete a TCS cabinet with modular power supply and internals	N/A	\$103,615.00	N/A	\$3,600 / \$3,291
3.16	Price to add or delete a DCS cabinet (empty shell)	N/A	\$3,600.00	N/A	\$1,043 / \$9,534
3.17	Price to add or delete a Marshalling Cabinet complete with terminal blocks	N/A	\$1,700.00	N/A	N/A
3.18	Price to add or delete a Printer	\$5,703 (11x17 Color Laser Jet)	\$650.00	\$520.00	
3.18*	Price to add or delete a Printer - Color- *EMERSON ADD				\$3,157 / \$2,885
3.19*	Price to add or delete a Printer - B & W - *EMERSON ADD				\$2,390 / \$2,184
BID NO. 2 TURBINE STEAM SEAL SYSTEM FOR UNIT 8					
	BIDDER:	General Electric International, Inc Omaha, NE	HPI-LLC Houston, TX	Schneider Electric Houston, TX	Emerson Process Management Power & Water Solutions, Inc. Pittsburgh, PA
1	TURBINE STEAM SEAL SYSTEM FOR UNIT 8	\$186,320.00	\$48,538.00	\$32,850.00	\$45,750.00
1.1	Unit 8 Steam Turbine Steam Seal Regulator Valves, Instruments, and Controls	\$183,320.00	\$46,538.00	\$32,750.00	\$43,750.00
1.2	Freight	\$3,000.00	\$2,000.00	\$100.00	\$2,000.00
	NOTE:	General Electric's bid as requested in bid doc. (two separate bids)	HPI's bid as requested in bid doc. (two separate bids)	Schneider's bid is all or nothing	Emerson's bid is all or nothing
OVERALL (BID NO. 1 AND BID NO. 2)		\$1,001,240.00	\$1,002,511.00	\$1,030,035.00	\$1,400,337.12