

**COUNCIL ACTION FORM**

**SUBJECT: POWER PLANT FUEL CONVERSION – BID NO. 1 – TURBINE CONTROL SYSTEM – CONTRACT COMPLETION**

**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.

Presently, the City of Ames has one open contract with General Electric (GE) pertaining to the conversion of the Power Plant (from coal to natural gas). This contract provides for the retrofit replacement of the turbine-generator controls on Units 7 and 8. On April 14, 2015, City Council awarded a contract to GE Energy Control Solutions, Inc., Longmont, CO for Bid No. 1 Turbine Control System in the amount of \$814,920. **This aspect of the conversion project is to purchase new Turbine Control Systems (TCS) for both Unit 7 and Unit 8.**

There were six change orders to this contract.

**Change Order No. 1** for \$244,731 was for the procurement of digital generator voltage regulator/excitation controls for Units 7 and 8.

**Change Order No. 2** for \$34,000 was of the procurement of 1) two TVIB vibration cards; and 2) hardware, software, and technical support to conduct the Unit 7 factory acceptance test.

**Change Order No. 3** for \$0 was for clarifying that the equipment purchased under this contract is considered personal tangible property in regard to sales taxes.

**Change Order No. 4** for \$16,853.64 was for the procurement of three replacement parts (2 terminal boards and 1 connector) for the Mark VIe turbine-generator controls for Unit 7.

**Change Order No. 5** for \$41,760 was for GE to provide additional "technical direction" for the installation of the new General Electric (GE) "Mark VIe" turbine-generator control system that replaced the original mechanical-hydraulic control system on Unit 8 turbine-generator.

**Change Order No. 6** for \$7,441.96 was for the procurement of one terminal board to replace a faulty terminal board in Unit 8's Mark VIe control cabinet.

**The total contract amount including these six change orders is \$1,159,706.60.**

**The Engineer's estimate of the cost for this phase of the project was \$1,161,000.** The current approved Capital Improvements Plan includes \$18,473,011 for the Unit 7 and Unit 8 fuel conversion. The complete project budget to date is shown on page 3.

All of the requirements of the contract have been met by GE Energy Control Solutions and City staff engineer has provided a certificate of completion.

**ALTERNATIVES:**

- 1) Accept completion of the contract with GE Energy Control Solutions., Longmont, CO for the Bid No. 1 Turbine Control System at a total cost of \$1,159,706.60, and authorize final payment to the contractor.
- 2) Delay acceptance of this contract.

**MANAGER'S RECOMMENDED ACTION:**

The contractor for the Bid No. 1 Turbine Control System has supplied all of the equipment specified under the contract. City staff engineer has issued a certificate of completion on the work, and the City is legally required to make final payment to the contractor.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.

## PROJECT BUDGET

The overall project budget and commitments to date are summarized below. To date, the project budget has the following items encumbered:

<b>\$18,473,011</b>	<b>Current Project Budget</b>
	<u>Sargent &amp; Lundy, LLC</u>
\$1,995,000	Encumbered not-to-exceed amount for Engineering Services
\$2,395,000	Engineering Services Contract Change Order No. 1
\$174,000	Engineering Services Contract Change Order No. 2
\$154,000	Engineering Services Contract Change Order No. 3
	<u>GE Power Inc.</u>
\$3,355,300	Contract cost for Natural Gas Conversion Equipment
\$29,869	Equipment Contract Change Order No. 1
(-\$321,600)	Equipment Contract Change Order No. 2
(-\$51,000)	Equipment Contract Change Order No. 3
\$1,620	Equipment Contract Change Order No. 4
\$0	Equipment Contract Change Order No. 5
\$19,857	Equipment Contract Change Order No. 6
\$62,310	Equipment Contract Change Order No. 7
\$121,360	Equipment Contract Change Order No. 8
	<u>Emerson Process Management Power &amp; Water Solutions, Inc.</u>
\$1,595,000	Contract cost for DCS equipment
\$39,377	DCS Contract Change Order No. 1
\$12,611	DCS Contract Change Order No. 2
\$0	DCS Contract Change Order No. 3
\$326,067.31	DCS Contract Change Order No. 4
	<u>GE Energy Control Solutions, Inc.</u>
<b>\$814,920</b>	<b>Contract cost for TCS equipment Bid 1</b>
<b>\$244,731</b>	<b>TCS Bid 1 Contract Change Order No. 1</b>
<b>\$34,000</b>	<b>TCS Bid 1 Contract Change Order No. 2</b>
<b>\$0</b>	<b>TCS Bid 1 Contract Change Order No. 3</b>
<b>\$16,854</b>	<b>TCS Bid 1 Contract Change Order No. 4</b>
<b>\$41,760</b>	<b>TCS Bid 1 Contract Change Order No. 5</b>
<b>\$7,441.96</b>	<b>TCS Bid 1 Contract Change Order No. 6</b>
	<u>General Electric International, Inc.</u>
\$186,320	Contract Cost for Turbine Steam Seal System - TCS Bid 2
\$24,536	TCS Bid 2 Contract Change Order No. 1

\$150,000	TCS Bid 2 Contract Change Order No. 2
\$0	TCS Bid 2 Contract Change Order No. 3
\$9,208.42	TCS Bid 2 Contract Change Order No. 4

Henkel Construction Co.

\$898,800	Contract cost for Control Room Installation General Work Contract
\$66,782	Control Room Contract Change Order No. 1
\$17,683.54	Control Room Contract Change Order No. 2

TEI Construction Services, Inc.

\$1,572,019	Contract cost for Mechanical Installation General Work Contract
\$8,750	Mechanical Contract Change Order No. 1
\$156,131	Mechanical Contract Change Order No. 2
\$187,984	Mechanical Contract Change Order No. 3
\$9,785.37	Mechanical Contract Change Order No. 4
\$3,032.17	Mechanical Contract Change Order No. 5
\$7,725.98	Mechanical Contract Change Order No. 6
\$3,032.16	Mechanical Contract Change Order No. 7
\$21,673.58	Mechanical Contract Change Order No. 8
\$175,496.89	Mechanical Contract Change Order No. 9
\$48,486.22	Mechanical Contract Change Order No. 10
\$12,539.88	Mechanical Contract Change Order No. 11

FPD Power Development, LLC

\$3,145,149	Contract cost for Electrical Installation General Work Contract
\$12,044.24	Electrical Contract Change Order No. 1
\$41,265.65	Electrical Contract Change Order No. 2
\$123,893.90	Electrical Contract Change Order No. 3
\$64,743.87	Electrical Contract Change Order No. 4

Graybar Electric

\$98,560	Contract cost for UPS System
(-\$1,010)	UPS System Contract Change Order No. 1

Hertz Equipment Rental Corporation

<u>\$166,835.50</u>	Contract cost for Portable Electric Space Heaters
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<b>\$18,279,946.64</b>	<b>Costs committed to date for conversion</b>
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**\$193,064.36**

**Remaining Project Balance** to cover miscellaneous equipment and modifications to the power plant needed for the fuel conversion