

COUNCIL ACTION FORM

**SUBJECT: POWER PLANT FUEL CONVERSION –
BID NO. 1 – TURBINE CONTROL SYSTEM – CHANGE ORDER NO. 4**

BACKGROUND:

Currently the City has two contracts with General Electric (GE) for the Power Plant conversion to natural gas. It was necessary to enter into two contracts with GE because the scopes of work required equipment and technical expertise from two separate divisions within GE. On April 14, 2015, City Council awarded a contract to GE Energy Control Solutions, Inc. of Longmont, Colorado for Bid No. 1 Turbine Control System in the amount of \$814,920. This contract is for replacement of the Turbine Control Systems for Units 7 and 8.

The action being requested is to approve Change Order No. 4 to this Turbine Control System Contract. Due to a wiring error on a construction drawing, a GE computer hardware cabinet containing vital circuit boards for Unit 7's Turbine Control System was connected to two power sources when it should have been only connected to one source. A lack of City documentation and historically inaccurate City drawings were the primary causes of the design flaw. The 120 VAC power source, which should have not have been connected to this cabinet, overheated and destroyed two circuit boards and a wiring connector, all of which had to be replaced at a cost of \$16,853.64.

Three change orders totaling \$278,731 were previously issued for this project:

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

Change Order No. 2 for \$34,000 was for GE to supply two TVIB vibration cards to the MkVle cabinet; and hardware, software, and technical support to conduct the Unit 7 factory acceptance test (FAT) over a three day period.

Change Order No. 3 for \$0 was for clarifying that the equipment purchased under this contract is considered personal tangible property.

The Engineer's original cost estimate for this portion of the project was \$1,064,728. With this change order, the total costs for the Bid No. 1 Turbine Control System within the project will be increased to \$1,110,504.64.

For the overall conversion project, the total project dollar amount committed to date inclusive of this change order is \$17,247,012.07. The approved FY 2015/16 Capital

Improvements Plan included \$26,000,000 for the Unit 7 and Unit 8 fuel conversion. However, much of the funding for the conversion project is coming from the sale of Electric Revenue bonds. Considering that the project is coming in much less than the budgeted amount, the size of the bond issuance was reduced and reflected the updated cost estimates. The project budget to date is shown on page 3. It should be noted that if there are future change orders that cause the budget to exceed the remaining balance, staff will not recommend the issuance of any additional revenue bonds. Rather, staff at that time will look at cancelling or delaying lower priority CIP projects to fund any shortfall.

ALTERNATIVES:

1. Approve contract Change Order No. 4 with GE Energy Control Solutions, Longmont, CO for the Bid No. 1 Turbine Control System in the amount of \$16,853.64.
2. Reject contract Change Order No. 4.

MANAGER'S RECOMMENDED ACTION:

The Power Plant's existing generator controls are mechanical and hydraulic, and need to be upgraded to digital to operate properly with the power plant's digital controls system. The electronic boards are critical to the operation of the turbine control system.

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:

\$17,475,000	FY 2015/16 CIP amount budgeted for project \$26,000,000 less reduced bonds issuance by \$8,525,000
	<u>Sargent & 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
	<u>Alstom 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
	<u>Emerson Process Management Power & 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
	<u>GE Energy Control Solutions, Inc.</u>
\$814,920	Contract cost for TCS equipment Bid 1
\$244,731	TCS Bid 1 Contract Change Order No. 1
\$34,000	TCS Bid 1 Contract Change Order No. 2
\$0	TCS Bid 1 Contract Change Order No. 3
\$16,854	TCS Bid 1 Contract Change Order No. 4
	<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
	<u>Henkel Construction Co.</u>
\$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
	<u>TEI Construction Services, Inc.</u>
\$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
	<u>FPD Power Development, LLC</u>
\$3,145,149	Contract cost for Electrical Installation General Work Contract
\$12,044.24	Electrical Contract Change Order No. 1
	<u>Graybar Electric</u>
\$98,560	Contract cost for UPS System
(-\$1,010)	UPS System Contract Change Order No. 1
	<u>Hertz Equipment Rental Corporation</u>
<u>\$166,835.50</u>	Contract cost for Portable Electric Space Heaters
\$17,247,012.07	Costs committed to date for conversion
\$227,987.93	Remaining Project Balance to cover miscellaneous equipment and modifications to the power plant needed for the fuel conversion