

**COUNCIL ACTION FORM**

**SUBJECT: POWER PLANT FUEL CONVERSION – DISTRIBUTED CONTROL SYSTEM (DCS) CHANGE ORDER NO. 2**

**BACKGROUND:**

In November of 2013 the City Council decided to convert the City's Power Plant from coal to natural gas. In May of 2014 the City Council selected Sargent & Lundy of Chicago, Illinois, to provide engineering and construction oversight services for the conversion project.

On March 10, 2015, City Council awarded a contract to Emerson Process Management Power & Water Solutions, Inc., Pittsburgh, PA, for the Distributed Control System (DCS) in the amount of \$1,595,000. Since that time, Change Order No. 1 in the amount of \$39,377 was approved administratively for Emerson to provide engineering, hardware, software, and on-site technical direction associated with adding the new Well #3 RTU I/O, the Bottom Ash Operator Workstation, and the RFD Operator Workstation.

**The action being requested is to approve Change Order No. 2 to the Distributed Control System Contract.** Change Order #2 in the amount of \$12,611 is for Emerson to supply, install, and configure five (5) pulse accumulator modules necessary to process the signals from the power plant's water well system to communicate with the new DCS. The water well system matches the output of the wells to the demand for water made by the power plant's cooling towers.

The signals currently sent by the existing water well system are not able to be received and processed correctly by the new DCS. The pulse accumulator modules will receive the signals from the water well system and modify them into signals the DCS can successfully process.

**With this change order, the total costs for the Distributed Control System Contract within the project will be increased to \$1,646,988.**

The dollar amount committed to date for the total gas conversion project (inclusive of this Change order No. 2) is \$16,967,640.18. The approved FY 2015/16 Capital Improvements Plan includes \$26,000,000 for the Unit 7 and Unit 8 fuel conversion. However, some of the funding of 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, staff has chosen to reduce the size of the bonds issuance and has reflected the budgeted amount accordingly. The project budget to date is shown on page 3. It should be noted if there are future Change Orders that cause the budget to

exceed the remaining balance, staff at that time will look at cancelling or delaying lower priority projects to fund the change.

**ALTERNATIVES:**

1. Approve contract Change Order No. 2 with Emerson Process Management Power & Water Solutions, Inc., Pittsburgh, PA, for the Distributed Control System in the amount of \$12,611.
2. Reject contract Change Order No. 2.

**MANAGER'S RECOMMENDED ACTION:**

The Power Plant's existing Distributed Control System is over 14 years old, and is no longer supported by the manufacturer. An up-to-date control system is needed for the safe and efficient operation of the plant into the future. Funding to purchase and install this system is available from the original project budget.

**This change order is needed for the DCS to be able to successfully receive the necessary information (signals) from the power plant's water well system and provide the proper control of the 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 <b>less reduced bonds issuance by \$8,525,000</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
<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
<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
<b>\$12,611</b>	<b>DCS Contract Change Order No. 2</b>
<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
<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
<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
<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
	<u>FPD Power Development, LLC</u>
\$3,145,149	Contract cost for Electrical Installation General Work Contract
	<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
<b>\$16,967,640.18</b>	<b>Costs committed to date for conversion</b>
<b>\$507,359.82</b>	<b>Remaining Project Balance</b> to cover miscellaneous equipment and modifications to the power plant needed for the fuel conversion