

COUNCIL ACTION FORM

SUBJECT: POWER PLANT NATURAL GAS CONVERSION EQUIPMENT, INCLUDING BURNERS, SCANNERS, THERMAL ANALYSIS, AND COMPUTER MODELING – CHANGE ORDER NO. 8

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 November 5, 2014, City Council awarded a contract to Alstom Power Inc. of Windsor, CT for the Natural Gas Conversion Equipment Including Burners, Igniters, Scanners, Thermal Analysis and Computer Modeling in the amount of \$3,355,300. Since that time Alstom Power Inc. has been acquired by General Electric, and as a result the company has been renamed GE Power, Inc.

The action being requested is to approve Change Order No. 8 in the amount of \$121,360 to this contract. GE Power's (Alstom) bid proposal allotted 1,120 hours of Field Service time. GE Power Inc. is expending additional Field Service hours than what was allotted in the bid proposal. Some of the allotted hours were consumed waiting for other equipment and systems to be started up and checked-out. It is important to understand that GE Power's Field Service personnel could not realistically leave the site while waiting for other equipment and systems to be checked out, since much of the time the boiler was either being actively fired, or banked to maintain steam pressure so that when the work on the other systems was done, the testing and tuning of the boiler could commence without undue delay.

CHANGE ORDER HISTORY:

The following seven change orders have previously been issued for this project:

Change Order No. 1 for \$29,869.00 to increase funds to cover costs for GE Power to perform base line testing for Unit 8.

Change Order No. 2 for a reduction of \$321,600 to 1) Add two flame scanner frequency signal analyzers on Unit #7; 2) reduce the number of natural gas burners (and associated burner equipment) from twelve to nine on Unit #8; and 3) add six frequency signal analyzers on Unit #8.

Change Order No. 3 for a reduction of \$51,000 since staff felt modeling for Unit 7 was not necessary to assist with burner design and/or location.

Change Order No. 4 in the amount of \$1,620 to supply one Flame Signal Analyzer.

Change Order No. 5 for \$0 to clarify that the equipment purchased under this contract is considered personal tangible property.

Change Order No. 6 in the amount of \$32,679 to provide equipment and labor necessary to install a grid sampling system for the tuning and performance testing of Unit 7 supply one Flame Signal Analyzer.

Change Order No. 7 in the amount of \$62,310 to provide to provide equipment and labor necessary to install a grid sampling system for the tuning and performance testing of Unit 8.

The total cost of all previous change orders was a reduction of (-\$246,122).

PROJECT COST HISTORY:

The Engineer's estimate of the cost for this phase of the project was \$4,500,000. With this change order, the total costs for the GE Power contract within the project will be increased to \$3,230,538.

Overall, the total project dollar amount committed to date (inclusive of this Change Order No. 8) is \$17,894,515.14. The approved FY 2015/16 Capital Improvements Plan includes \$26,000,000 for the Unit 7 and Unit 8 fuel conversion. This was subsequently adjusted to \$18,112,011. The complete project budget to date is shown on page 4.

ALTERNATIVES:

1. Approve contract Change Order No. 8 with GE Power Inc. of Windsor, CT for the Natural Gas Conversion Equipment Including Burners, Igniters, Scanners, Thermal Analysis and Computer Modeling in the amount of \$121,360.
2. Reject contract Change Order No. 8.

MANAGER'S RECOMMENDED ACTION:

This change order is needed to provide additional Field Service Technical Support for the installation, startup, and testing of the natural gas igniters, burners and associated equipment; and also to optimize (tune) the performance of the boilers while burning natural gas and co-firing refuse derived fuel (RDF). Due to problems that were encountered, especially with Unit 8, the installation of the combustion equipment and the tuning of the boiler is taking considerably more time than originally estimated.

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 based on a new project estimate
\$637,011	Unspent Funds from the Power Plant Cooling Tower CIP
\$18,112,011	
	<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
\$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
\$32,679	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 & 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
\$41,760	TCS Bid 1 Contract Change Order No. 5
	<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

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
---------------------	---

\$17,894,515.14	Costs committed to date for conversion
------------------------	---

\$217,495.86	Remaining Project Balance to cover miscellaneous equipment and modifications to the power plant needed for the fuel conversion
---------------------	---