

COUNCIL ACTION FORM

**SUBJECT: POWER PLANT NATURAL GAS CONVERSION EQUIPMENT,
INCLUDING BURNERS, SCANNERS, THERMAL ANALYSIS, AND
COMPUTER MODELING - 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.

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. **Council should note that Alstom Power Inc. was acquired by General Electric and as a result the company has been renamed GE Power, Inc. Alstom Power Inc. contacted staff about this change in ownership.**

There were eight change orders to this contract.

Change Order No. 1 for \$29,869.00 was 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 was for: 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 for GE Power to supply one Flame Signal Analyzer.

Change Order No. 5 for \$0 was for clarifying 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 equipment and labor necessary to install a grid sampling system for the tuning and performance testing of Unit 8.

Change Order No. 8 in the amount of \$121,360 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)

The total contract amount including these eight change orders is \$3,230,538. However, staff was able to negotiate shared-savings for Change Order #6. The City was billed \$19,857 instead of \$32,679. **The total billed amount including the Change Orders was \$3,217,716, a reduction of \$12,822.**

The Engineer's estimate of the cost for this phase of the project was \$4,500,000. The current approved Capital Improvements Plan includes \$18,112,011 for the Unit 7 and Unit 8 fuel conversion project. Additional funding in the amount of \$361,000 was transferred to the project budget from accumulated equipment replacement funds. As a result, the total dollar amount available in the project budget is currently \$18,473,011. The project budget to date is shown on page 3.

All of the requirements of the contract have been met by GE Power Inc. and the Engineer has provided a certificate of completion.

ALTERNATIVES:

- 1) Accept completion of the contract with GE Power Inc. of Windsor, CT for the Natural Gas Conversion Equipment Including Burners, Igniters, Scanners, Thermal Analysis and Computer Modeling at a total cost of **\$3,217,716**, and authorize final payment to the contractor.
- 2) Delay acceptance of this contract.

MANAGER'S RECOMMENDED ACTION:

The contractor for the Natural Gas Conversion Equipment Including Burners, Igniters, Scanners, Thermal Analysis and Computer Modeling has supplied all of the equipment specified under the contract. The 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:

\$18,473,011	Current Project Budget
	<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
\$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 & 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>
\$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

General Electric International, Inc.

\$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
\$123,893.91	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

	<u>Hertz Equipment Rental Corporation</u>
<u>\$166,835.50</u>	Contract cost for Portable Electric Space Heaters
\$18,285,326.33	Costs committed to date for conversion
\$200,506.67	New Project Balance to cover miscellaneous equipment and modifications to the power plant needed for the fuel conversion