

**COUNCIL ACTION FORM**

**SUBJECT: COMPLETION OF GAS TURBINE 1 CONTROL SYSTEM UPGRADE**

**BACKGROUND:**

On August 8, 2006, City Council awarded a contract to HPI, LLC, Houston, Texas, in the amount of \$160,409.86 to upgrade the control system for the gas turbine installed in 1972. This is the third and final contract of the overall project to upgrade the Gas Turbine (GT) 1 control system.

Under this contract, HPI, LLC provided the new control system hardware, software, and field installation, interfaced the system with the motor control center (MCC), and completed the startup of the unit. The project work has spanned several years. Seven change orders have previously been approved:

Original contract amount	\$160,409.86
Change Order No. 1, November 6, 2006	no price change
Change Order No. 2, December 6, 2006	no price change
Change Order No. 3, November 21, 2008	15,350.00
Change Order No. 4, December 5, 2008	21,705.00
Change Order No. 5, February 20, 2009	2,000.00
Change Order No. 6, April 14, 2009	19,500.00
Change Order No. 7, February 11, 2010	<u>10,440.00</u>
Adjusted contract amount	\$229,404.86

The project was delayed in 2006/07 as Electric Services focused on other, more critical matters including the Unit No. 7 overhaul project. Work was resumed in 2008. One of the change orders (No. 4) compensated the contractor for extra work and increased cost of materials caused by the delay and re-start of the project. Change orders also provided for integration of the new motor control center within the gas turbine control system, which was not originally included in the specifications, and added additional 24-volt DC input capacity to meet updated operational requirements. Additional costs were also incurred by change order to add safety features recommended by the consulting engineer reviewing gas turbine operations. The added features monitor fuel pressure going into the engine and provide for automatic shut-off if the pressure drops too low. Configuration of the new motor control center was also added to the scope of work performed by HPI, LLC.

There were two other major contracts for this project. They were awarded by City Council in 2007 and accepted by City Council as complete on April 14, 2009, and February 9, 2010, respectively.

The 2003-04 Budget included \$378,000 for this project. Total project expenses are as follows:

<b>Contractor/Vendor</b>	<b>Description</b>	<b>Amount</b>
HPI, LLC	Control system upgrade	\$ 229,404.86
Baker Electric, Inc.	Installation of motor control center	30,557.99
Electrical Materials, Inc.	Motor control center materials	132,514.15
Sega, Inc.	Engineering services	23,848.67
Combustion Turbine Systems	Start-up assistance	38,953.48
Misc. expenses		<u>7,339.97</u>
Total		\$ 462,629.12

Most of the project overages occurred in prior fiscal years. Additional funds for those overages were available in operation and maintenance accounts during the fiscal years when the overages occurred. There was available funding from approved 2009/10 Power Plant operations and maintenance accounts for the cost of the final change order to the HPI, LLC contract dated February 2010. The final payment in the amount of \$11,470.25 will be covered by funding available from Power Plant GT 1 parts and supplies operating budget, which has a balance of over \$20,000. **There is no additional funding beyond the \$11,470.25 (retainage) required to complete this project. The earlier project overages were approved and covered in prior years' budgets or in the current year's budget.**

Work under the contract with HPI, LLC to upgrade GT1 control system is now complete. HPI, LLC has successfully completed the scope of work including all punch list items. The certification of completion is attached.

#### **ALTERNATIVES:**

1. Accept completion of the control system upgrade project for gas turbine (GT) 1 at a total cost of \$229,404.86 and authorize final payment to the contractor in the amount of \$11,470.25.
2. Delay acceptance of this project.

#### **MANAGER'S RECOMMENDED ACTION:**

HPI, LLC has completed the control system upgrade for GT1. The new system will improve reliability, increase availability, and provide self-diagnosis capabilities.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving acceptance of completion of the control system upgrade project for GT1 at a total cost of \$229,404.86 and authorizing final payment to the contractor in the amount of \$11,470.25.



## Electric Services

Electric Administration Division  
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April 8, 2010

The Honorable Ann H. Campbell and Members of the Ames City Council  
515 Clark Avenue  
Ames, Iowa 50010

In Re: City of Ames Contract No. 2006-198

Honorable Mayor Campbell and City Council Members:

HPI, LLC of Houston, Texas has completed the work on the above contract. This is to certify that I have inspected the work and determined that it has been completed in accordance with the specifications.

There have been seven (7) changes orders to this contract.

I recommend acceptance of completion of the work in the total amount of \$229,404.86.

Respectfully submitted,

Tim McCollough, Power Plant Engineer  
Electric Services Department

Donald Kom, Director  
Electric Services Department