

**COUNCIL ACTION FORM**

**SUBJECT: POWER PLANT UNIT #7 AND #8 FUEL CONVERSION –  
PRELIMINARY PLANS AND SPECIFICATIONS FOR NATURAL GAS  
CONVERSION EQUIPMENT**

**BACKGROUND:**

**This project is required to meet future Environmental Protection Agency (EPA) air quality requirements for electric generating power plants.** In recent years the electric utility industry, and particularly utilities with fossil-fueled generation resources, has been challenged by the introduction of several major environmental regulations promulgated by the United States Environmental Protection Agency (EPA). At the same time, the price and supply of natural gas has dropped significantly in the United States. These two factors together have caused the industry to reevaluate its strategies of how to generate electric power. The City of Ames, with its two coal-fired generating units 47 and 32 years old, has carefully assessed its future role of supplying power for the City's electric ratepayers.

On November 12, 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. **This specific phase of the project is for the procurement of equipment, including burners, igniters, scanners, thermal analysis and computer modeling.**

The engineer's cost estimate for the procurement of this equipment is \$4,500,000. It is necessary to specify and order this equipment ahead of construction bidding due to the potentially long lead times. Upon City Council approval and receipt of favorable bids, the equipment will be ordered. In the future, Council will also be asked to approve additional phases of the project.

**The approved FY 2014/15 Capital Improvements Plan for Electric Services includes \$36,880,000 for the Unit #7 and #8 Fuel Conversion. This amount includes \$2,000,000 for engineering and \$34,880,000 for equipment and installation.**

To date, the project budget is as follows:

<b>\$36,880,000</b>	<b>FY 2014/15 CIP amount budgeted for project</b>
\$ 1,995,000	Encumbered not-to-exceed amount for Engineering Services (Approved by City Council on May 27, 2014)
<b><u>\$ 1,995,000</u></b>	<b>Total committed to date</b>
<b>\$ 4,500,000</b>	<b>Estimated cost for Natural Gas Conversion Equipment – Pending Council approval of plans and specifications (this agenda item)</b>
\$30,385,000	Remaining Balance to cover Installation, Distributed Control System, Natural Gas piping from the gate, and other miscellaneous equipment needed for the fuel conversion

Prior to award of this contract in October, staff will prepare an overall cash-flow projection for both the fuel conversion project and the associated gas transport line project. That projection will provide a basis for determining which portions of these expenses can be covered using the available balance in the Electric fund, and which portions will require the issuance of long-term debt. Those decisions will affect the level of electric rate increases needed to finance these major projects.

**ALTERNATIVES:**

1. Approve the preliminary plans and specifications for the Natural Gas Conversion Equipment Including Burners, Igniters, Scanners, Thermal Analysis and Computer Modeling, and set September 24, 2014, as the bid due date and October 14, 2014, as the date of hearing and award of contract.
2. Delay the purchase of the gas conversion equipment.

**MANAGER'S RECOMMENDED ACTION:**

Conversion of the City's Power Plant (Units 7 & 8) from coal to natural gas was previously approved by the City Council. This conversion is needed in order for the Power Plant to remain in compliance with state and federal air quality regulations. To meet the project timetable, this conversion equipment must be ordered in advance of scheduling the construction and installation.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.

The City Council should remember that the other essential component of the conversion to natural gas is the determination of how the gas will be transported to our power plant, either through a City-owned or through an Alliant Energy line. Staff is currently analyzing these two options to develop a recommendation for the preferred course of action.