

ITEM # 23  
DATE July 15, 2008

## COUNCIL ACTION FORM

**SUBJECT: RECOMMENDATION TO REJECT BIDS FOR WORK ON UNIT NO. 8  
FOR CITY OF AMES POWER PLANT NITROGEN OXIDE REDUCTION  
PROJECT, AND APPROVING PLANS AND SPECIFICATIONS AND  
NOTICE TO BIDDERS FOR REBID**

### **BACKGROUND:**

This project is to furnish and install nitrogen oxide reduction equipment on Units 7 and 8 at the Power Plant. The equipment is designed to reduce emissions of nitrogen oxides (NO<sub>x</sub>) in keeping with the USEPA Clean Air Interstate Rule (CAIR). Beginning in 2009, this rule requires facilities that emit NO<sub>x</sub> in excess of 0.15 lb NO<sub>x</sub> per million Btu heat input to obtain allowances from facilities with emissions under the 0.15 lb threshold. This program is known as "cap and trade" and in effect creates a market for NO<sub>x</sub> allowances. There is considerable uncertainty regarding the cost to obtain these allowances, but staff expects the value could be in a range of \$1000/ton NO<sub>x</sub> to more than \$5000/ton NO<sub>x</sub>. Given an allowance price of \$5000/ton, staff expects that NO<sub>x</sub> allowances could cost \$5,000,000 per year for Units 7 and 8. Allowances have currently been trading in excess of \$5,000 per ton.

NO<sub>x</sub> reduction projects for both Units 7 and 8 are currently budgeted for \$4,500,000 in capital over three fiscal years.

On June 19, 2008, bids were received as demonstrated on the attached report. As part of the review process, information contained in the proposals was sent to a third party furnace modeling firm that is currently entering the data into a model of the City's Unit No. 7 boiler. This is being done to confirm that the City can realize the level of nitrogen oxide reduction anticipated. The modeling process may take several weeks, and so any recommendations on award for Unit 7 work will be delayed pending completion of the modeling.

While reviewing the bids for Unit No. 8, it became clear that both bids received for that unit contained technical errors relating to calculations needed to supply overfire air to the boiler. After careful review of the bids received, and consideration of several options, staff recommends that Council reject all bids for the work on Unit No. 8. Staff also recommends that the City Council approve plans and specifications, and further direct the staff to rebid the Unit No. 8 nitrogen oxide reduction work at this time in order to keep the project moving forward at a rapid pace.

**ALTERNATIVES:**

1. a. The City Council may reject the bids for nitrogen oxide reduction on Unit No. 8 for the Plant Nitrogen Oxide Control Project.  
  
b. The City Council may approve plans and specifications and direct staff to rebid the Nitrogen Oxide Reduction Project for Unit No. 8, setting July 31, 2008, as the bid due date and August 12, 2008, as the date of hearing and award.
2. Continue to evaluate the bids for other options

**MANAGER'S RECOMMENDED ACTION:**

It is essential for the Power Plant to maintain a positive environmental record in the community and to be in compliance with EPA mandated rules and regulations. It is also imperative to achieve this in the most cost effective way possible. The bids received each contained a technical design error relating to overfire air equipment on Unit No. 8. Staff sought clarification from each of the responding bidders to attempt to salvage the bids. However, it is apparent that the best course for the City is to reject the bids submitted and solicit new bids for this work.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, rejecting the Unit No. 8 bids for the Electric Services Department Power Plant Nitrogen Oxide Control Project. The Council would also approve plans and specifications and direct staff to rebid the work, setting July 31, 2008, as the bid due date, and August 12, 2008, as the date of hearing and award.



INVITATION TO BID NO. 2008-165  
POWER PLANT NITROGEN OXIDE REDUCTION PROJECT

Company Name of Bidder	Advanced Combustion Technology, Inc. Hooksett, NH	Power & Industrial, Corp. Donora, PA	Power & Industrial, Corp. Donora, PA	Combustion Components Associates, Inc Monroe, CT
Bid Security	Yes	Yes	Yes	No
<b>ITEM NO. 1</b>				<b>Non-Responsive</b>
Furnish & Install Unit No. 7		NO BID	No Bid	Non-Responsive
Materials & Equipment	\$1,080,140.00			Non-Responsive
Labor	\$1,060,000.00			
Subtotal	\$2,140,140.00			
<b>ITEM NO. 2</b>			Alternate	<b>Non-Responsive</b>
Furnish & Install Unit No. 8				Non-Responsive
Materials & Equipment	\$1,538,060.00	\$3,220,228.00	\$2,691,211.00	Non-Responsive
Labor	\$1,166,000.00	\$3,081,558.00	\$2,495,166.00	
Subtotal	\$2,704,060.00	\$6,301,786.00	\$5,186,377.00	
DEDUCT IF ITEM NO. 1 & ITEM NO. 2 ARE SELECTED				
DEDUCT AMOUNT	(\$100,000.00)	N/A	N/A	
ALTERNATE: New Flow Element Unit No. 7				
equipment	\$55,000.00			
labor	\$25,000.00			
Subtotal	\$80,000.00			
ALTERNATE: New Flow Element Unit No. 8				
equipment	\$55,000.00	\$139,833.00	\$269,767.00	
labor	\$25,000.00	\$119,118.00	\$222,986.00	
shipping		\$40,000.00	\$36,000.00	
Subtotal	\$80,000.00	\$298,951.00	\$528,753.00	
Addenda No. 1	Yes	Yes	Yes	
Addenda No. 2	Yes	Yes	Yes	
Addenda No. 3	Yes	Yes	Yes	
Exceptions & Clarifications	Yes	Yes	Yes	
Affirmative Action				
Proposed Subcontractors				
Installation	Moorhead Machinery Capitol City Boiler Piibrico Company LLC	Enerfab Exothermic Engineering	Enerfab Exothermic Engineering	
Equipment	Metctfab Burners Flexter Forney Ignition Beck Air Monitor	EFFOX Beck Eastern Instruments	EFFOX Beck Eastern Instruments	
Site Visit	Yes	Yes	Yes	



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<b>NO<sub>x</sub> Reduction Project</b>	<b>Unit No. 7</b>			<b>Non-Responsive</b>
Low NO <sub>x</sub> burner system	\$132,500.00			
Overfire air system	\$413,400.00			
Igniters	\$132,500.00			
Scanner, if applicable	\$0.00			
Blower Skid	\$53,000.00			
Actuators	\$25,440.00			
Electrical	\$53,000.00			
Windbox Modifications	\$0.00			
Insulation and lagging	\$132,500.00			
Lead/Asbestos Abatement	\$0.00			
Demolition	\$106,000.00			
Mechanical Installation	\$954,000.00			
Pre-Outage Testing	\$10,600.00			
Furnace CFD Model Study	\$53,000.00			
Start-Up	\$10,600.00			
Commissioning	\$10,600.00			
Performance Bond	\$42,400.00			
Training	\$10,600.00			
	<b>\$2,140,140.00</b>			
	<b>Unit 8</b>			
Low NO <sub>x</sub> burner system	\$638,000.00	\$656,716.00	\$656,716.00	<b>Non-Responsive</b>
Overfire air system	\$277,720.00	\$673,418.00	\$396,746.00	
Igniters	\$106,000.00	\$212,400.00	\$212,400.00	
Scanner, if applicable	\$0.00	\$0.00	\$0.00	
Blower Skid	\$0.00	\$112,135.00	\$112,135.00	
Actuators	\$120,840.00	\$146,875.00	\$136,799.00	
Electrical	\$53,000.00	\$69,860.00	\$69,860.00	
Windbox Modifications	\$53,000.00	\$19,872.00	\$19,872.00	
Insulation and lagging	\$132,500.00	\$199,946.00	\$109,673.00	
Lead/Asbestos Abatement	\$0.00	\$5,607.00	\$5,607.00	
Demolition	\$106,000.00	\$2,956,010.00	\$2,343,951.00	
Mechanical Installation	\$1,060,000.00	\$0.00		
Pre-Outage Testing	\$10,600.00	\$53,379.00	\$53,379.00	
Furnace CFD Model Study	\$53,000.00	\$57,304.00	\$57,304.00	
Start-Up	\$10,600.00	\$9,767.00	\$9,767.00	
Commissioning	\$10,600.00	\$26,017.00	\$26,017.00	
Performance Bond	\$63,600.00	\$72,946.00	\$62,730.00	
Training	\$10,600.00	\$11,439.00	\$11,439.00	
Misc. Eng & Project Mgmt		\$978,125.00	\$865,984.00	
<b>Total</b>	<b>\$2,704,060.00</b>	<b>\$6,261,816.00</b>	<b>\$5,150,379.00</b>	