

COUNCIL ACTION FORM

SUBJECT: ENGINEERING SERVICES FOR AMES POWER PLANT SUBSTATIONS IMPROVEMENTS

BACKGROUND:

There are two upcoming projects affecting substations at the Power Plant. Staff has consolidated the required engineering services portions of these projects into a single request for proposal (RFP). A single RFP allows staff to procure these services more efficiently since each project requires similar qualifications from engineering firms.

This portion of the project is for the engineering which involves the analysis, design, drawings and specifications development, construction contract preparation, and detailed cost estimates for each of the two projects. The scope of work also requires the engineering firm to provide an approved bidders list for all major equipment purchases and a detailed engineer's estimate. In addition, the selected firm will provide construction management services for both projects.

Project 1: Ames Plant Distribution Substation Expansion

Upgrade the existing substation switchgear to replace obsolete equipment and provide an additional feeder to serve customer load in the downtown area and remove customer loads from the Power Plant bus, thereby improving plant reliability by reducing plant bus exposure to distribution faults. This upgrade will also include modern relaying and control equipment to improve reliability of service and protection of equipment. As an option, the proposal also asked for a price to design the addition of breakers to replace fusing for the two transformers in the substation.

Project 2: 69kV Switchyard Control and Relaying Upgrade

The 69kV Switchyard currently includes a 69kV transfer bus with ten 69kV circuit breakers that connect to Ames' 69kV transmission loop system, the Ames Plant 161kV Substation, and Ames' 69kV transmission tie to MidAmerican Energy. Relaying and controls for the 69kV Switchyard are presently located in the Power Plant, roughly ¼ mile away from the switchyard. The electromechanical relays in the Power Plant are obsolete and difficult to keep calibrated, and parts are no longer available for maintenance and replacements of these relays. The length and age of the control wires and ducts also make troubleshooting and repairs difficult. The project is to "engineer" the relocation of the relaying panels to the control house adjacent to the switchyard, and the installation of modern microprocessor-based relaying and control equipment. This project will also design the upgrade of the tap changer controls of two Power Plant service transformers to automatic controls for better regulation of the plant bus voltage.

On February 6, 2012, the RFP was issued to nineteen firms for proposals. The RFP was advertised on the Current Bid Opportunities section of the Purchasing webpage, and was also sent to one plan room. On March 2, 2012, staff received competitive proposals from eight firms. These proposals were then sent to a committee for evaluation. The committee consisted of a Power Plant Engineer, the Electrical Engineering Manager and an Electrical Engineer. The committee members independently evaluated and scored all eight of the proposals in two steps.

STEP 1:

The proposals were evaluated based on compliance with proposal documents and the exceptions each offeror took to the terms and conditions of the proposal. Each of those two criteria was rated on a Pass / Fail basis.

STEP 2:

The proposals with the “Breaker Option included” were evaluated based on: 1) price; 2) knowledge, capabilities, skills and abilities of the proposed team based on resumes submitted; and 3) the firm’s experience with similar projects

Based on the matrix, the averaged scores in this step are shown below:

Offerors	Averaged Scores	Not to Exceed Amount
Dewild Grant Reckert & Associates Company Rock Rapids, IA	763	\$322,700.00
SAIC Energy, Environment & Infrastructure, LLC, St. Paul, MN	706	\$229,253.00
Electrical Consultants, Inc., Madison, WI	679	Incomplete
NEI Electric Power Engineering Inc., Arvada, CO	633	Incomplete
Stanley Consultants, Inc. Des Moines, IA	627	\$705,680.00
Sega Inc., Overland Park, KS	583	\$454,875.00
Eng Global, Schaumburg, IL	566	Incomplete
Burns & McDonnell Engineering Co, Inc. Kansas City, MO	524	\$1,173,967.00

Each score was based on a scale of 1 to 10. Overall, 1,000 possible points were available cumulatively for each firm that responded. The overall weighted score was a function of the aforementioned factors of price, knowledge/capabilities (including understanding of scope and responsiveness to the RFP) and experience.

Council should note that in the overall evaluation, it is important to determine whether or not a firm has a good understanding of the project’s scope of work, so

part of the secondary evaluation included a review of their estimate of the total hours of work contained within the proposal.

From this review in the second step, some of the proposals were found to be incomplete:

- Electrical Consultants, Inc. did not include Construction Management services in its proposal (but did include an effective hourly rate for these services).
- NEI Electric Power Engineering Inc. did not include the Breaker Option in its proposal.
- ENG Global did not include the Breaker Option in its proposal.

Staff understands there is a large price differential between the proposals that received the highest and second highest average scores. Upon further review of these two proposals, it was determined that Dewild Grant Reckert & Associates Company's proposal included 2357 hours, compared to 1147 hours in SAIC's proposal. From this, it was deduced that SAIC may have missed some important aspects of design. The average number of hours for all proposals was 2,503 hours, so DGR was close to the average which further gives staff confidence DGR has a good grasp of the scope of work.

Based on the averaged scores and a unanimous decision by the evaluation committee, staff recommends that a contract be awarded to Dewild Grant Reckert & Associates Company (DGR), Rock Rapids, Iowa, for an amount not to exceed \$322,700. Payments would be calculated on unit prices bid for actual work performed.

Council should note that price in this proposal process was intentionally not a majority weighting factor in the overall evaluation, in deference to the more important aspects of qualifications, experience, and ability to perform the work. This secondary analysis of hours, however, was instrumental in assessing that DGR's proposal demonstrated that they had the better overall understanding of the project than the other two firms that ranked in the top 3 overall.

The funds for this engineering services work is contained within the following three CIP budget items: The approved FY 2012/13 CIP for the "69kV Switchyard Relay/Control" project includes \$150,000 for engineering services; the approved FY 2012/13 CIP under the "Ames Plant Distribution Substation" project includes \$110,000 for engineering services; and the current FY 2011/12 CIP includes \$100,000 under the "Ames Plant Distribution Substation Expansion" project for engineering services. The combined total budget for engineering services under these three CIP projects is \$360,000.

ALTERNATIVES:

1. Award a contract to Dewild Grant Reckert & Associates Company, Rock Rapids, Iowa, for the engineering services for Ames plant area substations improvements in an amount not to exceed \$322,700.
2. Reject all proposals and delay the engineering for Ames plant area substations improvements.

MANAGER'S RECOMMENDED ACTION:

These projects are necessary for Electric Services to continue providing safe, reliable, service to the customers in the City. The large dollar spread in responses caused staff to look into the detail of hours assumed by consultants in developing their bids. Consideration of skills, cost, and estimated hours (reflecting an understanding of the project scopes) were part of the selection process. The analysis of proposals has identified the firm that staff judges to be able to provide exceptional engineering services at the best price.

This new substation switchgear will help move customer loads off the Power Plant bus and will help to limit exposure of the Power Plant bus to distribution faults, thereby improving Power Plant reliability. By installing modern, programmable relays and updated controls for 69kV Switchyard breakers, long-term reliability can be improved by eliminating the obsolete and maintenance-intensive electromechanical relays and aged, lengthy control circuits that are no longer accessible for repair.

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