

MINUTES
BOARD OF CONTROL
CITY OF WADSWORTH

March 24, 2011

9:00 a.m., Administrative Conference Room

PRESIDING:

BOARD MEMBERS PRESENT:

Chris Easton, Director of Public Service,
Matt Hiscock, Director of Public Service

OTHER OFFICIALS PRESENT:

Norman Brague, Director of Law

VISITORS:

Cathy Porchowsky, Secretary to the
Mayor and Safety Director

PRESS REPRESENTATIVES PRESENT:

none

Mr. Easton called the meeting to order at 9:00 a.m.

Capacitor Banks

Mr. Easton explained that the role of the capacitor banks was to maintain consistent voltage levels in a system. It was very hard on the equipment if the voltage fluctuated. The substation automation station automated the process to balance the load. Although the apparent low bidder was Wesco, there was a Buy American issue. Therefore, the Electric Department's recommendation for the best and lowest bid was Pepco. The Electric Department conducted a losses evaluation-unbillable power that's lost between two ends. They wanted to ensure they had the most efficient equipment, and they felt that Pepco was the best choice. Therefore, Mr. Easton recommended that the board approve the award of a contract to Pepco for capacitor banks, consistent with their bid, and that the Director of Public Service be directed to enter into said contract. All were in favor. **MOTION ADOPTED.**

Replacement Circuit Breakers

Mr. Easton also explained that the circuit breakers were designed to transfer the loads between high and low voltages. The goal was to break the voltage to prevent it from traveling where it shouldn't, and thereby, protect the systems from surges and subsequent damage. The Electric Department recommended Siemens, who was the lowest bidder. Therefore, Mr. Easton recommended that the board approve the award of a contract to Siemens for replacement circuit breakers, consistent with their bid, and that the Director of Public Service be directed to enter into said contract. All were in favor. **MOTION ADOPTED.**

ADJOURNMENT:

Mr. Easton made a motion to adjourn the meeting. All were in favor. The meeting was adjourned at approximately 9:45 a.m.

Discussion of Bids for Capacitor Banks and Replacement Circuit Breakers

Bids received 3/4/11

Evaluated by: MKF 3/22/11

Capacitor Banks: Recommend Award to Pepco: \$120,540

In general, the submitted bids were very disappointing in terms of the responsiveness of the bidders to our specifications. Pricing however was good compared to the cost of capacitor banks purchased in the past and is less than estimated.

Apparent Low Bid from Wesco:

There is likely a Buy American issue (Ref: SGIG FAQ Buy American Applicability 02 05 2010.pdf) since the Wesco base bid has little if any US content. This creates potential liability for the City to fund 100%, not 50% of this expenditure. The capacitors are manufactured in China and the vacuum switches and racks appear to be from Canada. I estimate the largest cost components are the capacitors and switches, with the racks and assembly of same being very minor components of the overall cost. China is not on the list of countries accommodated by trade agreements amending the Buy American requirements. Wesco's alternate bid for synchronous switches is based on Joslyn switches which increases the US content to the extent that synchronous switches are needed. This is unknown until transient studies are completed but likely to be a few banks at most.

Our specification stated "Cooper or approved equal". I was not aware that ABB no longer manufactures this equipment in the USA and Wesco did not request product approval prior to submission of their bid.

Wesco did not include the required engineering information for losses and tank rupture to enable comparison to the specified Cooper capacitor units. I could not locate this information on ABB's website.

I believe this purchase represents "manufactured goods" to be "incorporated into" a "Public Work" by construction activity as defined in the "Buy American" regulations. Thus the potential liability to the City for accepting this bid is approximately \$55K if DOE funding is ruled inapplicable. Based on the the potential Buy American liability I recommend this bid be rejected.

Next apparent low bid from Pepco:

Pepco's bid is based on GE capacitors and Joslyn vacuum switches. The Joslyn switch operator has a 50% higher inrush current than the Cooper switches which will impact controller design cost negatively (perhaps

\$100 each unit) and which will require more care in providing control power considering voltage drops.

Pepco also did not include the required capacitor loss and tank rupture engineering data. GE's website provides tank rupture information but I could not locate loss data. I requested this information from Pepco to clarify their bid and Pepco responded with GE documents listing the losses at 0.1W/kVAr. Cooper rates their design at 0.07W/kVAr. Assuming the bank is energized 3000 hours/year (during the heavier load periods), and power currently at \$80/MWhr in the summer escalating at 2%/year, with interest at 4% the NPV of additional losses over a 20 year life is \$139 for the 1200kVAr banks and half of that for the 600kVAr banks, not enough to change the outcome.

Pepco bid a total lot price for 10 banks of each size. We requested pricing per each so quantities can be changed to adapt to project requirements as engineering is completed. I requested per each pricing from Pepco as a clarification to their bid. Pepco responded saying \$6027 each for both ratings. This add/delete price x20 equals the bid price so this is a clarification, not a substantive change in their bid.

Third apparent low bid from Power Line Supply:

This bid is based on Cooper capacitors and switches as specified. No pricing was offered for the alternates.

High bid from HD Supply:

This bid is were based on the same Cooper offering as Power Line Supply. Neither Cooper distributor offered a price for Cooper synchronous switches. This is surprising since we have purchased Cooper synchronous switches in the past. To my knowledge Cooper still offers this product and it is puzzling why the alternate was not bid. The Department favors standardization of equipment and therefore an award based on Cooper equipment would be most desirable. Unfortunately the lack of responsiveness to our request for synchronous switch option pricing coupled with the higher first cost of the base capacitor banks even when loss evaluation is considered eliminates the Cooper distributor bids from further consideration.

Replacement Circuit Breakers: Recommend award to Siemens: \$42,834

Four bids were received for the 3 vacuum replacement circuit breakers. All bids appear to be in order and pricing is less than estimated.

Apparent low bid from Siemens

Siemens bid \$14,278 each, considerably lower than their bid of \$17,250 each in 2010. (No purchase was made in 2010 due to prior equipment

quality issues and anticipated budget issues.) This price compares very favorably to the \$14,890 paid in 2000 for the same model. There are no apparent issues with this bid.

Next apparent low bid from Wesco

Wesco bid \$18,255 each for ABB AMVAC breakers. Wesco/ABB bid \$16,105 each in 2010. (No purchase was made in 2010 due to prior equipment quality issues and anticipated budget issues.) We purchased similar AMVAC breakers in 2009 at \$14,960 each however our specification has been amended to address technical issues with those breakers, adding some cost.

The ABB AMVAC breaker incorporates a new magnetic actuator technology which reduces moving mechanical parts to a minimum. In theory this results in a lower maintenance/total ownership cost compared to the traditional stored mechanical energy designs used by Siemens and others. However, we have not had any history of high maintenance costs for our existing Siemens breakers so I have difficulty justifying nearly a \$12k higher initial cost based on a presumed lower future maintenance cost. An additional consideration is that we have already invested in spare parts for both the Siemens and ABB units so there is not a spare parts cost factor to consider in either case.

Third apparent low bid from Powell:

Powell bid \$19,400 each. Powell's design requires modification of the breaker compartments to utilize a different breaker racking and secondary coupler scheme. Powell justifies the design change by stating that "Powell feels the original design is lacking in safety". Powell contacted us to ask if their equipment would be approved considering this exception to the specifications. My reply was that the City would appreciate having their proposal for analysis of their concerns with the original design and if the cost was attractive their design would be considered. Powell's bid as submitted offers no factual basis for their "feeling" that the Siemens design is "lacking in safety". Taking into account today's product liability environment, the fact that Siemens and others continue to produce equipment of the design in question I conclude that Powell's "feeling" is at odds with other manufacturers. It is therefore difficult to justify the significantly higher cost of their proposal both in purchase price, installation costs, and the economic cost of the loss of interchangeability with existing equipment. Note as well that our personnel are very safety conscious when racking the existing breakers, utilizing 40 cal FR coveralls, face shields/hoods, and gloves to provide arc flash/blast protection.

Highest apparent bid from Pepco:

Pepco bid \$23,375 each for breakers manufactured by Eaton/Cutler

Hammer of a design similar to the Siemens unit.

I note that the Eaton/Cutler Hammer and ABB breakers both utilize the original Allis-Chalmers (now Siemens) racking mechanism design.