

**COUNCIL ACTION FORM**

**SUBJECT: APPROVAL OF PRELIMINARY PLANS AND SPECIFICATIONS FOR UNIT 8 COOLING TOWER MAINTENANCE**

**BACKGROUND:**

This project is for repair and replacement of the internal and structural components of the main Power Plant cooling tower for Unit #8. This tower has deteriorated from erosion and decay from near continuous operation. Cooling towers are used to cool the water that condenses the steam into water after power is generated in the steam turbine. This project is crucial because the Power Plant turbines cannot operate without functioning cooling towers. Deficient cooling tower operation directly effects power production and lowers plant operating efficiency.

Staff contacted a cooling tower firm to perform an inspection on both cooling towers in the fall of 2009. Based on the inspection report, it was determined that both towers were in need of significant repairs. These needed repairs must be completed in the near future in order for the facility to continue operating in a reliable and safe manner.

The engineer's estimate of the cost for repair of Unit #8's cooling tower is \$1,578,000. The approved FY 2010/2011 Capital Improvement Plan for the Power Plant contains \$1,220,000 for Unit #8. A total of \$30,000 of this budgeted amount was used for the engineering and field construction management portion of the project, leaving \$1,190,000 to do the repair work.

Council should note that the engineer's estimate includes a 15% contingency (\$206,000) for unknowns. It has also been staff's experience that engineers tend to error on the high side when preparing estimates for work of this type. Staff is confident that sufficient funds are available to complete this critical work. There has been tremendous interest from contractors for this work and staff expects the demand for work to aid in receiving very competitive bids. Should the bids be higher than anticipated, staff will review the planned 2010/11 projects to identify sufficient funds to complete the work.

Upon City Council approval and receipt of favorable bids, this work would begin during the Unit #8 spring 2011 outage which is scheduled to begin April 1, 2011. It is the goal to have this project complete by May 15.

**ALTERNATIVES:**

1. Approve the preliminary plans and specifications for Unit 8 Cooling Tower Maintenance and set March 2, 2011, as the bid due date and March 22, 2011, as the date of hearing and award of contract.
2. Delay maintenance of Unit 8 cooling tower.
3. Modify the work scope to lower the cost and amount of repair work to be done at this time, and budget for additional future maintenance.

**MANAGER'S RECOMMENDED ACTION:**

This project is necessary to maintain the integrity and efficiency of the cooling towers. The tower structure is made from wood which erodes and decays over time with the constant flow of air and water. Wooden towers require partial wood replacement periodically. In addition, this project will remove the asbestos in the towers that could become airborne in case of a fire or collapse. When a cooling tower operates inefficiently, the amount of coal required per kilowatt of electricity increases. The schedule for this project is crucial to prevent a catastrophic failure that would stop the production of electricity, to complete the work prior to peaking season, and to maintain the overall tower effectiveness.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving the preliminary plans and specifications for Unit 8 Cooling Tower Maintenance, setting March 2, 2011, as the bid due date and March 22, 2011, as the date of public hearing.