

## COUNCIL ACTION FORM

### **SUBJECT: UNIT 8 FEEDWATER HEATER REPLACEMENT**

#### **BACKGROUND:**

The proposed project is for a contractor to supply and replace feedwater heaters on Power Plant Unit 8. Feedwater heaters are devices that use extraction steam from the turbine to preheat the feedwater prior to returning to the boiler. This increases the efficiency of the entire steam generating system.

Due to the high number of failures over the past 30 years of operation, the units are now operated in partial bypass mode that results in the use of more fuel needed to produce electricity. Staff has determined that the failures were due to the thinning and wear of the feedwater heater tubes. The need for replacement of these heaters is due to long term corrosion and wear. Twenty-five percent of the tubes have been plugged and replacement of the feedwater heaters is required. Water testing and continuous monitoring is currently in place to reduce corrosion rates and optimize tube life.

**Council should note that Unit 7 and Unit 8 each have two feedwater heaters that need to be replaced. At this time, only the feedwater heaters for Unit 8 are scheduled to be replaced since Electric Services currently has a construction permit allowing for this maintenance project. The replacement of the Unit 7 feedwater heaters will be subject to a future regulatory permit approval process, with the actual project planned during FY 2014/15.**

The Engineer's estimate of the total contractor cost of this project for Unit 8 is \$875,000. The 2012/13 Capital Improvements Plan includes \$980,000 for Feedwater Tube Replacement for Unit 8, while the 2014/15 CIP includes \$980,000 for the future Feedwater Tube Replacement planned for Unit 7.

#### **ALTERNATIVES:**

1. Approve the preliminary plans and specifications for the Unit 8 Feedwater Heater Replacement and set April 11, 2012, as the bid due date and April 24, 2012, as the date of hearing and award of contract.
2. Delay the replacement of the Unit 8 feedwater heaters.

**MANAGER'S RECOMMENDED ACTION:**

Feedwater heaters are subject to long term corrosion and wear due to operating conditions. Replacement is required in order to maintain operability and high efficiency. As is noted above, poorly maintained feedwater heaters increase costs for the utility, and there is a risk of damage to the boiler due to a higher firing rate. Additionally, staff has already obtained a construction permit for this project so there is minimum risk of anticipated delays in beginning the work.

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 the Unit 8 Feedwater Heater Replacement and setting April 11, 2012, as the bid due date and April 24, 2012, as the date of hearing and award of contract.