

COUNCIL ACTION FORM

SUBJECT: **POWER PLANT UNIT #7 FEEDWATER HEATER
REPLACEMENT**

BACKGROUND:

This proposed project is for a contractor to supply and replace feedwater heaters on Power Plant Unit #7. 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. This results in the use of more fuel being 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 now required. Water testing and continuous monitoring is currently in place to reduce future corrosion rates and optimize tube life.

The Engineer's estimate of the total contractor cost for this project is \$850,000. The 2014/15 Capital Improvements Plan includes \$980,000 for the Feedwater Tube Replacement for Unit #7 project.

ALTERNATIVES:

1. Approve the preliminary plans and specifications for the Unit #7 Feedwater Heater Replacement and set November 26, 2014, as the bid due date and December 9, 2014, as the date of hearing and award of contract.
2. Delay the replacement of the Unit 7 feedwater heaters.

MANAGER'S RECOMMENDED ACTION:

Feedwater heaters are subject to long-term corrosion and wear due to operating conditions within the Plant. Replacement is required in order to maintain operability and high efficiency. Heater payback is about 4 months of continuous operation. 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.

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