

COUNCIL ACTION FORM

SUBJECT: POWER PLANT STEAM TURBINE NO. 8 OVERHAUL

BACKGROUND:

This project is for the overhaul of the steam turbine on Unit 8. This unit is scheduled to be disassembled and inspected after over 27,000 hours of operation during the spring 2013 outage. This work is required to replace worn parts and inspect the turbine and generator for repairs that may be needed to avoid more serious damage. Repairs and replacement of worn parts will be completed as the inspection progresses. Experience has shown that certain parts require replacement every outage and some parts become unusable during the disassembly process.

This overhaul and parts replacement is required and recommended by boiler and machinery insurance carriers and follows accepted industry standards. During this turbine outage, parts suppliers will be invited in to inspect the steam path internals and take measurements so as to accurately bid parts in the future. It is anticipated that steam path components will require replacement during the next 5-year overhaul, but can be repaired one more time during this upcoming overhaul.

This portion of the project is for the procurement of an experienced turbine contractor to perform all the disassembly, cleaning, repairing and reassembly of Unit 8 Turbine Generator. Council may recall that bids have been issued for the purchase of the parts expected to be used during the overhaul.

The engineer's estimate for anticipated overhaul replacement parts is \$533,000 based on preliminary quotes. Council may recall that this is currently being bid with a due date of September 26, 2012. Parts are required to be ordered earlier due to the potential of long delivery items. The estimate to perform the overhaul work required with a contractor and a reasonable amount of repair is \$1,830,000.

The approved FY 2012/13 Budget and Capital Improvements Plan includes \$3,500,000 for the turbine generator overhaul including parts, professional technical assistance, and contractor services. This budget includes the cost of the inspection and normal and reasonable repairs anticipated after 27,000 hours of operation. **The full extent of the repair work required will be unclear until after the turbine-generator is opened up and inspected. The turbine-generator inspection and repair services are being bid with optional pricing for work that may be necessary once the unit is opened up.**

Upon City Council approval and receipt of favorable bids, the work would begin during the 2013 spring outage.

ALTERNATIVES:

1. Approve the preliminary plans and specifications for the Steam Turbine No. 8 Overhaul and set October 31, 2012, as the bid due date and November 13, 2012, as the date of hearing and award of contract.
2. Delay the overhaul.

MANAGER'S RECOMMENDED ACTION:

The Unit 8 Turbine-Generator is scheduled for a major overhaul starting in the spring of 2013. Turbine-generator overhauls are typically performed in the industry about every five years to restore unit efficiency and to maintain good unit life and reliability. Without this overhaul, the Power Plant's performance would degrade considerably over time and the risk of catastrophic failure will increase. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.

In order to avoid the same problems we experienced the last time we overhauled Unit 8 the City Council should be aware that we intend to:

- 1) give greater emphasis on a company's proven expertise when evaluating preferred bidder;
- 2) gain a tighter control on costs by requiring bids for optional work should it be identified once the unit is opened; and
- 3) dedicate a staff engineer to oversee the project.