

## COUNCIL ACTION FORM

**SUBJECT: POWER PLANT STEAM TURBINE NO. 8 PARTS PROCUREMENT**

**BACKGROUND:**

This project is for the procurement of critical and long lead time steam path parts for Unit #8 turbine-generator. The unit is scheduled to be disassembled and inspected (after over 20,000 hours of operation) during the fall 2012 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, including catastrophic failure of equipment. Repairs and replacement of worn parts will be completed as the inspection progresses. This overhaul and parts replacement is required and recommended by boiler and machinery insurance carriers and follows accepted industry standards.

This portion of the project is for the purchase and delivery of the major turbine components with the majority being turbine blades. Council should note that not all parts may be procured due to budget constraints, and that the latter (also the larger) stages of the turbine may need to be repaired one more time before replacement. The latter stages of the turbine are large in diameter and are the most costly. Currently, the details of the manufacture of these critical steam path parts are only known to the original equipment manufacturer (OEM). Third party suppliers are able to supply the necessary components if they are given an opportunity to inspect and measure the exact size of the parts. During the fall 2012 outage, reputable third party suppliers will be given the opportunity to inspect the turbine while it is open, thus allowing them to acquire the necessary information to be able to provide quotes for turbine parts.

The engineer's estimate for all the needed parts is \$2,000,000. We may or may not need to replace all of the parts included in the engineer's estimate. It is the intent to bid all parts at this time, evaluate the prices and then determine which parts give us good value now, and which would benefit from third party competition. **This bid is for the purchase of the turbine parts only. The inspection/repair portion of the project will have separate plans and specifications and will be bid separately at a later date.**

The approved FY 2011/12 Budget and Capital Improvements Plan includes \$1,900,000 for the Unit #8 Turbine Generator Five-Year Overhaul. This budget includes the cost of the inspection and normal repairs anticipated after 20,000 hours of operation. **Council should note that 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 project will be bid with optional pricing for work that may be necessary once the unit is opened up. This project will not be completed until the 2012/13 Fiscal Year. Once we have determined the parts which will be needed**

**under this bid process, and the cost of the inspection itself, we will provide an updated project budget for the 2012/13 CIP.**

Upon City Council approval and receipt of favorable bids, the work to replace the turbine parts (primarily blades) would begin during the 2012 fall outage. It is the goal to have these parts delivered no later than September 1, 2012.

**ALTERNATIVES:**

1. Approve the preliminary plans and specifications for the steam turbine no. 8 parts procurement and set November 9, 2011, as the bid due date and November 22, 2011, as the date of hearing and award of contract.
2. Delay the purchase of the steam turbine parts.

**MANAGER'S RECOMMENDED ACTION:**

The Unit 8 Turbine-Generator is scheduled for a major overhaul in the fall of 2012. 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. This project allows staff to procure the services of a competent contractor to prepare for the overhaul by acquiring a number of parts with a long delivery time. These are parts that will be needed for the overhaul. Without this overhaul, the Power Plant's performance would degrade considerably over time. This is particularly the case with the turbine blades.

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 steam turbine no. 8 parts procurement and setting November 9, 2011, as the bid due date and November 22, 2011, as the date of hearing and award of contract.