

COUNCIL ACTION FORM

**SUBJECT: APPROVE CHANGE ORDER #1 WITH GENERAL ELECTRIC FOR
FIELD ENGINEERING SERVICES FOR UNIT #7 TURBINE
GENERATOR OVERHAUL AT POWER PLANT**

BACKGROUND:

This CAF is for additional testing of the Unit 7 generator exciter and AVR. It also covers the repair (rebabbit) of Turbine Bearings #1, #3, and #4.

Testing of the U7 Generator exciter and AVR were originally included as part of the scope for the turbine/generator overhaul contractor, HPI, LLC. However, due to recent upgrades to the exciter and AVR, it has been determined the work to perform the testing on these components require access to GE proprietary information. As such, GE has prepared a change order for the testing of the generator exciter and AVR. In return, HPI, Inc. will issue a credit of \$22,420 for the portion of their contract that was unable to be performed.

Additionally, this work will cover the repair (rebabbit) of turbine bearings #1, #3, and #4 which were discovered to be damaged during the disassembly and inspection of the turbine parts performed by GE and HPI.

These items will need to be addressed to ensure the safe and reliable operation of the Unit 7 turbine and generator while the unit is online. Failure to properly test and repair these items could potentially result in failure of the components while online resulting in unplanned outages and increased maintenance and repair costs.

The City Purchasing Policies and Procedures require change orders in excess of 20% of contract award be approve by City Council. Invoices will be based on contract rates for time and materials for services actually received and accepted by the City.

Proposed GE scope of work:

Unit 7 Generator Exciter and AVR Testing	\$22,420.00
Unit 7 Turbine Bearing Rebabbit for Bearings #1, #3, and #4	\$27,566.22
Total	\$49,986.22

The approved FY 2018/19 Capital Improvements Plan includes the following funding for the Unit 7 Turbine Generator Overhaul.

2017/18 Engineering/Parts	\$ 750,000
2018/19 Labor	1,500,000
2018/19 GE Tech Support	<u>300,000</u>
TOTAL	\$2,550,000

Contracts awarded to date on this project are:

HPI LLC (<i>Perform Overhaul</i>)	\$680,694.00
General Electric (<i>Field Engineering Services</i>)	\$200,000.00
Change Order #1	49,986.22
MD&A (<i>Turbine Parts</i>)	\$114,613.67
Argo (<i>Turbine Parts</i>)	\$265,649.00
Burns & McDonnell (<i>Engineering</i>)	<u>\$43,000.00</u>
Total	\$1,353,942.89

ALTERNATIVES:

1. Approve Change Order #1 with General Electric International, Omaha, NE, for additional testing of the Unit 7 generator exciter and AVR and repair (reabbit) Turbine Bearings #1, #3, and #4 in the amount of \$49,986.22
2. Forego additional testing and bearing repair and operate the unit with the risk of failure of turbine/generator components resulting in significant unplanned outage durations and repair cost.

CITY MANAGER'S RECOMMENDED ACTION:

This project will complete an overhaul of Unit 7 Turbine generator and turbine. It is crucial to perform this work in a timely fashion in order to maintain compliance with the turbine generator and maintain reliability. General Electric is the manufacturer of the turbine generator and are the only company that can perform the proposed testing on the exciter and AVR. It is critical that the bearings have no defects and the fit to shaft is within the tight tolerances required. Therefore having General Electric perform this task is essential.

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