ITEM #:	**10**
DATE:	**10-28-25**
DEPT:	**ELEC**

COUNCIL ACTION FORM

SUBJECT: **COMBUSTION TURBINE CONTROLS UPGRADE - CHANGE ORDER NO. 1**

BACKGROUND:

The existing controls systems on Combustion Turbines 1 (CT1) and Combustion Turbine 2 (CT2) are outdated and are in need of replacement. The hardware, software, system architecture, and several pieces of instrumentation are antiquated; replacements are difficult to find; and generally the systems no longer reflect best industry practices. Electric Department staff worked with AP4 Energy Services, LLC to develop a specification for acquiring a combined, updated controls system for both combustion turbines.

During the development of the specification and review of the existing infrastructure, it was also determined the existing motor control center (MCC) for CT1 must be updated. The existing MCC utilizes a proprietary communications protocol that is no longer supported by the manufacturer and replacement parts are difficult to acquire, with only used parts available.

The most effective method of replacement is by swapping out the electrical "buckets". Replacement buckets were obtained from the OEM, Eaton, following approval of City Council at the February 13, 2024 meeting. These buckets have been received and will be installed concurrently with the controls update to CT1. With the buckets and supporting documentation delivered, the specification was finalized and prepared for the proposal process.

On August 12, 2025, City Council awarded a contract to Petrotech Inc., of New Orleans, LA, for the Combustion Turbine Controls Upgrade project in the amount of $1,213,252.67.

THIS ACTION:

The following additional beneficial changes to the proposed combustion turbine controls system have been identified as the project entered initial design.

1) Petrotech has identified additional controls equipment that should be replaced during this project, including remote Input/Output equipment inside a cabinet located on the engine enclosure. Replacement of this equipment will ensure additional reliability of the entire system. This addition will cost an extra $34,980.44, inclusive of sales tax.

2) Petrotech has also proposed that the controls systems for both CT1 and CT2 will function more effectively in a centralized network architecture. A centralized network architecture will provide: 1) improved generating asset reliability by employing a redundant server in case of primary server failure, 2) better security and access control by centrally managing user permissions, 3) enhanced performance by reducing local workstation processing, and 4) simpler system maintenance by hosting all applications on a single server that is accessible at any workstation.

The servers for this centralized architecture will be hosted in the CT2 control room. Locating the servers in the CT2 control room will enable the Combustion Turbine site to operate locally in case of communication loss with the Steam Electric Plant control room and continue the functionality of the data historian. This addition will cost an extra $139,320.42, inclusive of sales tax.

Change Order No. 1, in the amount of $174,300.86, will be necessary to implement these improvements. The current CIP includes a total of $2,850,000 in funds available to perform the combustion turbine controls upgrades. There is currently $1,218,293 available to fund this change order. Staff does not foresee additional expenses for the project at this time.

ALTERNATIVES:

1. Approve Change Order No. 1 with Petrotech Inc., of New Orleans, LA, for Combustion Turbine Controls Upgrade in an amount of $174,300.86.

2. Do not approve the change order.

CITY MANAGER'S RECOMMENDED ACTION:

Change Order No. 1 consists of two changes to the proposed combustion turbine controls system. The additional controls equipment for CT2 will ensure higher reliability of the entire system. A centralized network architecture will enable Electric Department staff to more effectively control and maintain Combustion Turbines 1 and 2. The centralized network architecture will increase reliability of the CTs, improve system security, enhance controls system performance, allow for simpler controls system maintenance, and enable greater controls system functionality during emergency situations. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.