

**COUNCIL ACTION FORM**

**SUBJECT: AWARD OF CONTRACT FOR BLACKSTART LOAD BANK TESTING**

**BACKGROUND:**

GT1 is a combustion turbine placed into service by the City in 1972. This unit is used to provide additional peaking capacity to the City's electric utility and can be started on relatively short notice in response to emergency conditions. GT1, GT2, and the utility's two power boilers all require a source of electricity prior to starting; electricity is needed to operate controls, motors, fans, pumps, and other components prior to the unit producing energy to send to the power grid.

Normally, the source of electricity to start a generating unit is a connection to the regional electric grid. However, GT1 was designed to be capable of starting in blackout situations without using any power from the surrounding grid. The ability to conduct a "black start" is critical in situations where all the connections to the electric grid are damaged, as experienced in the 2020 derecho.

GT1's ability to conduct a black start was lost after a controls upgrade in 2009. The current Capital Improvements Plan includes a project to restore black start capability to GT1 to improve the reliability of the City electric system. Controls tuning and upgrades, completed in March, brought black start capability back. However, the unit needs to be tested.

Load bank testing is a procedure that isolates a generating unit from the electric system and tests the unit's ability to respond to power demands. The power demand is created by equipment that creates a significant electrical demand by converting the energy to heat. This testing is typically performed on combustion turbines every 2-5 years, after major maintenance projects, and after control system upgrades. Load bank testing has never been done on GT1 and with the restoration of black start capabilities, testing should be completed.

Staff solicited proposals for load bank testing and on September 28, 2022, one proposal was received from Sunbelt Rentals, Inc. of Broomfield, CO in the amount of \$76,911.87. Staff has reviewed the proposal and has found it suitable. The Capital Improvements Plan includes a project for Critical Electric System Generators. The FY 2022/23 budget includes \$200,000 for these services.

**ALTERNATIVES:**

1. Award a contract to Sunbelt Rentals, Inc., Broomfield, CO, for the GT1 Blackstart Load Bank Testing project in the amount of \$76,911.87.
2. Reject the proposal from Sunbelt Rentals, Inc. and issue another request for proposals.

**CITY MANAGER'S RECOMMENDED ACTION:**

Load bank testing is the final step in restoring the black start capabilities of GT1 and is a planned project in the current CIP. It is important to decreasing the length of city-wide electrical outages and increasing the reliability of the City's electric system. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative #1 as, described above.