



# MEMORANDUM

## City of Venice

### Utilities Department

TO: Ed Lavallee, ICMA-CM, MPA, City Manager

THROUGH: Click or tap here to enter text.

FROM: Javier A. Vargas, MPA, Utilities Director



DATE: October 1, 2019

COUNCIL APPROVAL: Yes

MEETING DATE: October 22, 2019

STRATEGIC PLAN GOAL: Upgrade and Maintain City Infrastructure and Facilities

SUBJECT: Work Assignment for Consultant Services for Design, Permitting and Construction Related Services for WTP Emergency Generator Addition and Electrical Switchgear Replacement

**Background:** The City owns and operates the Water Treatment Plant (WTP) located at 200 N. Warfield Ave. This WTP produces potable water which provides 100% of the potable water for the City. The WTP has an emergency generator that is capable of running the WTP in the event of interruption of the electric power supply, as required by State regulations. An existing electrical switchgear (SWGR) distributes FP&L and emergency generator electric power throughout the treatment facility. This SWGR was installed in 1990 and is approximately 30 years old. The SWGR, which was manufactured by General Electric (GE) is reaching the end of its useful life. Furthermore, GE no longer manufactures the major components of the SWGR.

As part of an evaluation of electric power use by Utilities facilities, an assessment was conducted by Black and Veatch on the condition of the WTP's existing emergency generator and electrical switchgear. This assessment concluded that the switchgear was near the end of its useful life and needed to be replaced. The assessment also concluded that the existing emergency generator, although nearly 30 years old, is in good condition and has remaining useful life, but would benefit from a rebuild in the near future and is more likely to need major repairs compared to a new unit. Furthermore, the existing emergency generator benefits from the existing agreement with the FP&L load control program (LCP) whereby the City receives significant financial benefits for remaining in this program. The existing generator is grandfathered into the LCP with respect to air quality requirements. If the City were to purchase a new Tier 4(\*) emergency generator, the new generator would need meet Tier 4 air quality standards in order to maintain compliance with the LCP. A Tier 4 generator would cost approximately

50% more than the cost of a Tier 2 generator (as proposed), would cost more to operate and maintain, and would not fit within the current generator room.

In order to provide for long term reliable backup electric power to operate the WTP and to maintain compliance with the LCP with the least amount of capital and operational costs, the recommendation was made to install a second Tier II emergency generator, in an all weather outdoor enclosure next to the current generator room. This will allow the continued use of the existing generator for the LCP while the second generator would serve strictly as a backup to the existing generator in case it were to fail. The new generator would also serve as the primary backup generator while the old generator is being refurbished or when major maintenance would be needed in the future.

This Work Assignment will provide for the design, permitting and construction oversight for the installation of the standby engine generator and switchgear. Black and Veatch was selected for this assignment based on their expertise with this type and project. The anticipated construction costs for this project is approximately \$1,950,000.00.

(\*) Tier 4 refers to a set of emissions requirements established by the EPA to reduce emissions of particulate matter (PM), oxides of nitrogen (NOx) and air toxics from new, non-road diesel engines.

**Requested Action:** Approval of the Work Assignment with Black and Veatch to provide consulting services to design, permit and oversee the construction of the Engine Generator and Switchgear project for the estimated price not to exceed \$380,764.00.

If for an agenda item, this document and any associated backup created by City of Venice staff has been reviewed for ADA compliance: Yes

City Attorney Review/Approved: Yes

Risk Management Review: Yes

Finance Department Review/Approved: Yes

Funds Availability (account number): Click or tap here to enter text.

**ORIGINAL(S) ATTACHED:** Attachment A – WTP Switchgear Replacement and Emergency Generator

Addition - Scope of Services

Cc: Peter Boers, Procurement Manager; Stacy McKenzie, Office Manager