

Title

Request approval for Alban CAT emergency generator for Town Hall.

Body

EXPLANATION AND SUMMARY:

The Department of Public Works worked with on-call engineering consultant Whitman Requardt & Associates to perform a study to determine the required size, fuel type, and major design issues associated with a new generator for Town Hall. The current Town Hall emergency generator is located in the parking lot behind the building adjacent to the dumpster enclosure. The generator previously was located at the Town of Vienna Police Department and was repurposed for Town Hall after the police department generator was upgraded. The existing emergency generator supports life safety and some mission critical loads within Town Hall. It is a Generac 45KW/75 kVA model SG045.

The existing generator is unable to provide sufficient power to run anything beyond current mission critical loads such as the elevator, computer servers, and a limited number of offices. A new appropriately sized generator will reliably run all computer servers, offices, and other power needs that will allow Town Hall to remain open during power outages. In addition, a new generator is required to provide sufficient and reliable emergency power to police operations, which will be relocated to Town Hall during construction of the new police station. Finally, the current generator is at the end of its useful life and puts out inconsistent power, which can damage electrical equipment.

The proposed new generator will serve the entire Town Hall with reliable power. It will have a natural gas engine that does not need to be refueled like a diesel engine. A natural gas engine also operates efficiently at lower power loads than a diesel engine, which cannot operate below 80% of its rated capacity without what is called "wet stacking." Wet stacking occurs when the generator does not burn all of the fuel before it is exhausted. The fuel then builds residue in the exhaust system. This requires extra maintenance or additional equipment to simulate load on the generator so that it runs in the optimal range. A natural gas generator is capable of operating at lower ranges, which will accommodate differences in peak energy demand of the building in winter and summer months.

The Department of Public Works recommends procuring turnkey installation of a Caterpillar Natural Gas Standby Generator Set Model G150 Rated at 150kW @ 120/208V. Procurement will be contracted under a national Joint Powers Alliance contract for Electrical Energy Power Generation with related Parts, Supplies and Services using Caterpillar Inc. The local subsidiary of Caterpillar Inc. is ALBAN CAT.

Staff plans to place the new generator adjacent to the HVAC chiller unit and between the parking lot and Dominion Power substation. If this preferred location does not work out, it can be installed in the same location as the existing generator.

A new connection box for roll-up generators is required by Fairfax County for all new generator installations. This connection will be installed on the exterior of Town Hall. This provides a connection point for a portable generator in the event that the permanent generator needs to be replaced or is undergoing major repairs.

Two new ATS devices and one new power panel will be installed in the Town Hall electrical room. A Level 2 sound attenuation enclosure and critical grade muffler will be installed with the generator to limit noise levels to the surrounding area.

The cost for turnkey installation of the generator is \$305,000; with a 10% contingency of \$30,500, the total request is for \$335,500. The generator is anticipated to be up and running by July 2020. The 2020 CIP authorizes up to \$450,000 for this project.

Departmental Recommendation: Recommend approval.

Finance Recommendation: Recommend approval.

Purchasing Recommendation: Recommend approval.

Town Attorney Recommendation: The Town may ride the Joint Powers Alliance contract for the proposed purchase of a Town Hall generator or solicit bids in the discretion of Town Council.

Town Manager's Recommendation: I recommend the Town Council approve the purchase of an emergency generator for Town Hall from ALBAN CAT, as presented.

Cost and Financing: \$335,500 (\$305,000 bid + 10% contingency)

Account Number: TBD from 2020 CIP

Decision Needed by This date: 01/06/2020

PROPOSED/SUGGESTED MOTION

Recommended Action

"I move to approve purchase of an emergency generator for Town Hall from ALBAN CAT in an amount not to exceed \$335,500."

Other action deemed necessary by Council.