

COUNCIL ACTION FORM

SUBJECT: WATER POLLUTION CONTROL FACILITY METHANE ENGINE-
GENERATOR SET NO. 2 REHABILITATION

BACKGROUND:

The City's Water Pollution Control (WPC) Facility has a Caterpillar engine that drives an electrical generator rated at 300 kW. This engine-generator set is currently not operational. It was installed in the mid-1980s and has approximately 47,028 hours of service. Rehabilitation of the engine is not a routine maintenance task, but is something that can be expected approximately every 30,000 hours.

The engine drives a generator that is connected to the plant's electrical grid via automatic switchgear. Hot water from the engine is used to heat the primary digesters in order to treat the sludge generated by the WPC Facility. This process, in turn, produces methane that powers the Caterpillar engine that drives the electrical generator. Thus, electrical energy is generated via using byproducts from the treatment process.

Overhaul costs for this engine have risen significantly due to low availability of parts for the aging unit. This rehabilitation was previously bid during the summer of 2012, but all bids exceeded the available budget for the work and staff recommended the work be postponed to allow a long-term strategy for methane engine maintenance to be incorporated into the Capital Improvements Plan (CIP). On November 27, 2012 Council concurred with staff's recommendation and rejected all bids.

The FY 13/14 CIP includes \$200,000 for one more overhaul of unit #2 before its scheduled replacement in 2019. The engineer's estimate for the overhaul is \$185,000. An engineering services contract has already been awarded in the amount of \$2,000. Bid materials are completed and the work is ready for a Notice to Bidders to be issued.

ALTERNATIVES:

1. Grant preliminary approval to the plans and specifications, issue a Notice to Bidders, and set August 15, 2013 as the bid due date and August 27, 2013 as the date for public hearing and award.
2. Do not approve plans and specifications at this time.

MANAGER'S RECOMMENDED ACTION:

Methane Engine-Generator Set No. 2 is the main workhorse of the digester heating and electrical energy production systems. Sludge stabilization is an integral and vital component of the treatment process at the WPC Facility. Additionally, production of electrical energy through the use of byproducts from the treatment process is an excellent example of "Green Energy." It is in the City's best interest to restore this unit to service as soon as possible.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving the plans and specifications and issuing a Notice to Bidders for this project.