

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 by using byproducts from the treatment process.

This project was authorized by Council on April 24, 2012, including the allocation of \$129,000 (\$53,449 in savings from another CIP project and \$75,551 from the available Sewer Fund balance). The engineering consultant's contract has already been awarded in the amount of \$2,000. The engineer's estimate for the general contractor, and any possible subcontractors, is \$120,000.

ALTERNATIVES:

1. Grant preliminary approval to the plans and specifications, issue a Notice to Bidders, and set September 25, 2012 as the bid due date and October 9, 2012 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. 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.