ITEM # 11
DATE: 07-12-11

COUNCIL ACTION FORM

SUBJECT: WATER POLLUTION CONTROL FACILITY METHANE ENGINE GENERATOR REHABILITATION PROJECT

BACKGROUND:

The Water Pollution Control Facility utilizes three Caterpillar engines to convert methane into electricity that helps power the WPC plant. Methane Engine Generator Set #3 is no longer operational. This engine generator set was installed in 2003 and has been in service for approximately 34,125 hours. The rehabilitation of these engines is not a routine maintenance task, but it is something that can be expected to be required approximately every 30,000 hours.

The engine drives a synchronous 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 Plant. This process in turn produces methane that powers the Caterpillar engine that drives the electrical generator. Thus, electrical energy is generated by using byproducts of the treatment process.

This project is included in the 2010-11 Capital Improvements Plan as part of WPC Facility Improvements with an estimated cost of $75,000. An engineering consultant's contract has already been awarded in the amount of $2,000. The anticipated cost for the rehabilitation work is $70,000.

ALTERNATIVES:

1. Grant preliminary approval to the plans and specifications and issue a Notice to Bidders, setting July 28, 2011 as the bid due date and August 9, 2011 as the date for public hearing and award.

2. Do not approve the plans and specifications for this project at this time.

MANAGER'S RECOMMENDED ACTION:

Production of electrical energy through the use of treatment process byproducts is an excellent example of "Green Energy". It is in the City's best interest to restore this unit to service.

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.