

**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

768



**FROM:** Economic Development Agency

**SUBMITTAL DATE:**  
July 29, 2010

**SUBJECT:** Southwest Justice Center Cogeneration Plant Redesign In-Principle

**RECOMMENDED MOTION:** That the Board of Supervisors approve in-principle the Southwest Justice Center (SWJC) Cogeneration Plant Redesign Project.

**BACKGROUND:** In 2006, a cogeneration plant powered by two, 16 cylinder Waukesha natural gas engines was installed at the Southwest Justice Center Campus, were installed. The natural gas powered cogeneration plant yields considerable cost savings by replacing the demand for electric power with a less expensive and cleaner natural gas fuel source.

In March and June 2008, the cogeneration plant experienced two catastrophic engine failures. The plant consists of two large 750 KW generators that produce 1500 KW of electricity. In March 2008, Engine #1 failed and in June 2008, Engine #2 failed and stopped working. Both engine failures were due to the lack of proper lubrication to the internal engine components. To determine the exact cause of the failures, both engines had to be torn down, repaired, and rebuilt.

(Continued)

Robert Field, Director  
Assistant County Executive Officer/EDA

<b>FINANCIAL DATA</b>	<b>Current F.Y. Total Cost:</b>	\$ 0	<b>In Current Year Budget:</b>	Yes
	<b>Current F.Y. Net County Cost:</b>	\$ 0	<b>Budget Adjustment:</b>	No
	<b>Annual Net County Cost:</b>	\$ 0	<b>For Fiscal Year:</b>	2010/11

<b>SOURCE OF FUNDS:</b> Deferred maintenance	<b>Positions To Be Deleted Per A-30</b>	<input type="checkbox"/>
	<b>Requires 4/5 Vote</b>	<input type="checkbox"/>

**C.E.O. RECOMMENDATION:** **APPROVE**

**County Executive Office Signature** BY:   
Dean Deines

Departmental Concurrence

Reviewed by  
**CIP TEAM**  
DEAN DEINES

Consent  
 Policy  
  
 Consent  
 Policy  
  
 Dept't Recomm.:  
 Per Exec. Ofc.:

**BACKGROUND:** (Continued)

Repairs to both engines were paid for by the County of Riverside's insurance carrier, McLaren's Young International, through Risk Management. During the repairs, it was determined by Endurant Energy that the engines at the SWJC plant had been designed improperly. It is critical that the plant run due to energy savings and an Agreement between the County, Southern California Edison (SCE) and The Gas Company. The main purpose of a cogeneration system is to produce electricity using natural gas which is more cost effective than to purchase the electricity through SCE. When fully operational, the cogeneration plant produces enough electricity to supply most of the electrical needs for the central plant. This is significant since the SWJC central plant is the second largest consumer of electricity among county buildings in SCE territory.

As a result of the County entering into an agreement with SCE, the County received a rebate of \$997,650 which was applied to the installation of the plant. If the cogeneration plant is not fully operational and producing electricity, SCE and The Gas Company will require that the County return the \$997,650. Therefore, to create current savings in electrical cost and to avoid substantial penalty for a non-performing system, the SWCJ cogeneration system must be redesigned to prevent future failures.