



# Memorandum

## MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by: *[Signature]* Date: 4/14/17  
General Manager

DATE: April 14, 2017  
TO: Board of Directors  
FROM: Director of Engineering and Compliance/District Engineer  
SUBJECT: Approve Funds for Completion of Related Fire Damage Repairs to Include Purchase of Jenbacher J320 Engine

**RECOMMENDATION:** That the Board authorize funding not to exceed \$615,000 for the purchase of an unused 2012 Jenbacher 320 "B" series engine and for related power system repairs including parts, freight, sales tax, installation, and commissioning to redress the fire damage to the Unit #2 Engine and related systems.

### BACKGROUND

In 2016, Jenbacher engine Unit #2 experienced a fire at the front end of the engine that damaged the engine and related systems associated with Unit #2 and, to a lesser extent, Unit #1. The resulting damage to the internal engine block is not known with great specificity even though there has been some limited investigation to assess its condition. Several parties have visited the site to observe the engine conditions and to assist the District on developing and evaluating various engine repair options. At this time it is generally believed that the engine can be repaired mechanically.

District staff has also been in contact with Special District Risk Management Authority (SDRMA), the District's insurance carrier. SDRMA has visited the site with their own fire damage evaluation consultant and completed their own inspections of the fire damage. The District has coordinated with SDRMA on the various repair options and shared the cost estimates developed for the repairs. As of this writing, no determination has been made about what the final insurance claim payment amount will be for coverage of this type of incident.

### DISCUSSION

Currently, the District has two operating engines functioning and the new enclosed flare as backup. This provides the compliance functions for the control of landfill gas (LFG). With the enclosed flare as back-up, the District can operate in compliance for the control of LFG at all times. However, since the District depends on the LFG system to provide power to both District operations and the franchise truck yard parking facility and CNG fueling system, having greater redundancy in the power generation system is important. Additionally, the District is losing the power generation revenue (current value is about \$0.04 per kW) which helps offset operating costs of the LFG to Energy (LFGTE) Plant.

District staff, in coordination with several repair service providers and SDRMA, evaluated the following options to redress the fire damage to engine Unit #2:

Option	Operating Hours	Estimated Range of Cost
1. Rebuild engine offsite with new & remanufactured parts	26,000	\$540,000 – 560,000
2. Rebuild engine onsite with new parts from an unused (2012) engine (Jenbacher J320 - B Series)	26,000	\$625,000 – 635,000
3. Replace with an unused (2012) engine (Jenbacher J320 - B series)	0	\$585,000 – 615,000
4. Replace with new (2017) engine (Jenbacher J320 - B series)	0	\$985,000 – 1,015,000

The Option 1 costs of repairing the existing engine at an offsite location is the lowest cost option primarily because of the use of remanufactured parts. The Option 2 costs of repairing the existing engine onsite is more costly primarily because the extent of parts replacement utilizing the new, unused (2012) engine block as the source of the parts. Options 1 and 2 represent rebuilding an existing engine block that was involved in the fire and has already had 26,000 operating hours. Option 3 represents using a new, unused (2012) Jenbacher J320 B series engine to replace the existing Unit #2 engine block from 2002. Option 4 represents a new (2017) Jenbacher J320 B series engine to replace the existing engine. Of the four options, District staff recommends Option 3 to replace the existing fire damaged engine block with a new, unused (2012) engine block being offered by GE at a discounted cost to eliminate it from their unproductive inventory. District staff recommends Option 3 for the following reasons:

- Quickest repair option
- Lower engine emissions
- Better parts availability; recognizes that the existing 2002 engine parts are being phased out
- Represents the greatest value relative to cost of the repair options
- Removes concern for integrity of existing block involved in fire
- Removes wiring/electrical issues with existing Unit # 2 controls
- Increases parts compatibility between engine Units #2 and #3
- Improves controls and offers better data collection and monitoring features
- Existing engine block can be sold to further reduce costs to the District

**FINANCIAL IMPACT**

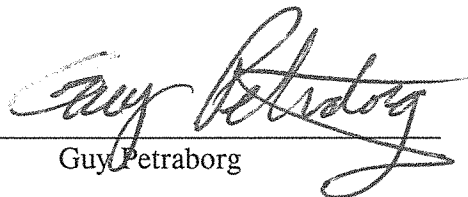
The total cost for the purchase of an unused 2012 Jenbacher 320 “B” series engine for replacement of the existing 2002 Unit #2 Jenbacher J320 “A” series engine and for related power system repairs including parts, freight, sales tax, installation, and commissioning to redress the fire damage to the Unit #2 Engine and related systems is estimated to not exceed \$615,000. It is estimated that the insurance claim settlement for the engine fire will exceed \$375,000. Following payment of the \$250,000 insurance deductible, it is estimated that there will be at least \$125,000 of the remaining balance of the insurance claim settlement to apply to the engine repair costs. Therefore, the projected net cost of the engine repairs to the District is estimated to be no more than \$490,000. These repair costs for Unit #2 were not budgeted in the FY 2016/17 Budget. The repair costs would be paid from the cash reserve account.

### STRATEGIC PLAN

The District has had an operating LFG to energy (LFGTE) system since 1983. The District's Strategic Plan and our Pillars of Sustainability both point to the beneficial use of the landfill gas captured. The Unit #2 Engine Replacement is consistent with the District's Strategic Plan vision.

### CONCLUSION

Staff recommends the Board authorize funding not to exceed \$615,000 for the purchase of an unused 2012 Jenbacher 320 "B" series engine for replacement of the existing 2002 Unit #2 Jenbacher J320 "A" series engine and for related power system repairs including parts, freight, sales tax, installation, and commissioning to redress the fire damage to the Unit #2 Engine and related systems.



Guy Petraborg