



# STEERING COMMITTEE

## Agenda Report

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**File #:** 2021-1562

**Agenda Date:** 3/24/2021

**Agenda Item No:** 12.

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**FROM:** James D. Herberg, General Manager  
Originator: Rob Thompson, Assistant General Manager

**SUBJECT:**

**CENTRAL GENERATION ENGINE OVERHAUL AT PLANT NO. 1**

**GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION:

- A. Award a Sole Source Service Contract to Cooper Machinery Services to provide a Central Generation Engine No. 1 Overhaul at Plant No. 1, per Proposal 210204-839, for a total amount not to exceed \$3,705,932; and
- B. Approve a contingency of \$741,186 (20%).

**BACKGROUND**

The Orange County Sanitation District (Sanitation District) operates eight Central Generation (Cen Gen) engines manufactured by Cooper Bessemer. The Cen Gen facilities began service in 1993 to improve air emissions by using clean burn engine technology to convert biogas into electricity and process heat. The Cen Gen facilities supply approximately 60% of the electricity for our treatment plants. Heat recovered from the engines is used in the digestion process and for absorption chillers at Plant No. 1 providing cooling for the Administration Building, Laboratory Building, Central Generation Building, and Operations Building.

The Cen Gen plants have been providing reliable service for more than 25 years and the engines are now in need of scheduled major overhauls. In October 2019, a service contract was awarded to UPS Midstream Services, Inc. to overhaul the first two of the eight engines. UPS Midstream Services was selected using a competitive proposal solicitation process.

Original Equipment Manufacturer (OEM) service and parts have been supplied through General Electric. Recently, General Electric spun off Cooper Machinery Services to provide these OEM parts and services.

**RELEVANT STANDARDS**

- Protect OC San assets
- Maintain a proactive asset management program
- Use all practical and effective means for resource recovery

- 24/7/365 treatment plant reliability

## **PROBLEM**

UPS Midstream Services has been unable to complete the necessary overhaul under the October 2019 Service Contract. The first engine rebuilt under the contract has catastrophically failed twice. A third-party engineer was hired to inspect the parts and services supplied by UPS Midstream Services. This third-party engineer and Sanitation District staff agree that the parts and services supplied by the vendor do not meet the requirements of the Service Contract. Therefore, the Sanitation District terminated the Service Contract and is seeking reimbursement from UPS Midstream Services and through Sanitation District insurance providers.

The Sanitation District has a South Coast Air Quality Management District (SCAQMD) permit to operate Cen Gen Engine No.1 at Plant No. 1. That permit requires annual testing of emissions. The Sanitation District has received a very specific permit variance that requires that the engines must be operable and tested by April 2022 with a set of schedule milestones along the way.

## **PROPOSED SOLUTION**

Staff recommends awarding a Service Contract to Cooper Machinery Services to provide parts and services to overhaul Cen Gen Engine No. 1 located at Plant No. 1.

## **TIMING CONCERNS**

The Sanitation District has a SCAQMD air quality permit obligation to get the engine rebuilt and tested on a strict timeline. This timeline does not allow for a normal competitive solicitation process or the performance risks associated with the process.

## **RAMIFICATIONS OF NOT TAKING ACTION**

Failure to take action on this repair in a timely fashion risks the loss of the SCAQMD permit to operate the engine. In addition, without Engine No. 1 there is not standby capacity for energy conversion. This situation reduces overall reliability and has the potential annual cost impact of approximately \$1,400,000 to offset energy purchases and incurred demand charges.

## **PRIOR COMMITTEE/BOARD ACTIONS**

October 2019 - Board of Directors awarded a service contract to UPS Midstream Services, Inc. to provide Central Generation Engine Overhauls at Plant Nos. 1 and 2 (for a total of two engines), Specification No. S-2019-1074BD, for a total amount not to exceed \$5,636,335.

## **ADDITIONAL INFORMATION**

The original Service Contract with UPS Midstream Services included two engines, one at Plant No. 1 and one at Plant No. 2. This request is only for Engine No. 1 at Plant No. 1 due to the urgency of the permitting conditions and the need for a standby unit at Plant No. 1. The second engine at Plant No. 2 is being moved to an upcoming project scoped to rebuild the balance of the engines at both plants.

Staff believe the best opportunity to meet the timeline requirements of the SCAQMD permit variance is to retain the OEM parts and services supplier. It is also an opportunity to verify the newly created spin-off company is capable of supporting the machinery.

On a parallel path, staff are pursuing an engineering study to better estimate the short, medium, and long-term viability of the current engine generators. The current direction is to rebuild the current engine generators to extend the life of the existing units, as well as the electric, gas, and process heat infrastructure for 25 years. When the next round of 125,000 hour engine rebuilds come due, it is probable that new, more efficient energy conversion technologies will be cost effective to pursue.

A 20% contingency is requested in the event of unforeseen damages or delays due to the catastrophic failures the engine had incurred and delays in fabricating additional long lead time parts beyond those anticipated.

The terms and conditions of the service contract are currently being reviewed. Staff anticipates a final contract for publication no later than close of business on Friday, March 19, 2021.

## **CEQA**

N/A

## **FINANCIAL CONSIDERATIONS**

This request complies with the authority levels of the Sanitation District's Purchasing Ordinance. This item has been budgeted in the FY20-21 & FY 21-22 Budget, Capital Treatment System Improvement Projects, Line Item J-135 (Section 8, Pg. 44).

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
03/24/2021	\$3,705,932	\$741,186 (20%)

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## **ATTACHMENT**

*The following attachment(s) may be viewed on-line at the OC San website ([www.ocsan.gov](http://www.ocsan.gov)) with the complete agenda package:*

- Service Contract - added 03/19/2021

KS:lc:gc