



## Agenda Report Details (With Text)

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**Title:** POWER HEADS REPAIRS FOR CENTRAL GENERATION ENGINES AT PLANT NOS. 1 AND 2

**Sponsors:** Riaz Moinuddin

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Date	Ver.	Action By	Action	Result
3/16/2022	1	OPERATIONS COMMITTEE		
3/2/2022	1	OPERATIONS COMMITTEE		

**FROM:** James D. Herberg, General Manager  
Originator: Riaz Moinuddin, Director of Operations & Maintenance

**SUBJECT:**

**POWER HEADS REPAIRS FOR CENTRAL GENERATION ENGINES AT PLANT NOS. 1 AND 2**

**GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION:

- A. Approve additional funds of \$60,300.60 to Sole Source Purchase Order 146032-OS, for Cooper Machinery Services to repair 16 spare Engine Power Heads for Engines at Central Generation for Plant Nos. 1 and 2, for a new total amount not to exceed \$132,915 plus taxes and shipping; and
- B. Approve a contingency of \$13,292 (10%).

**BACKGROUND**

The Orange County Sanitation District (OC San) operates eight Cooper Bessemer engines which includes three 12 cylinder engines at Plant No. 1 and five 16 cylinder engines at Plant No. 2. The two plants produce approximately 8.2 million kilowatt hours per month, providing approximately 70% of the power required for operation. 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. Additionally, heat recovered from the engines is used in the digestion process at the treatment plants and for absorption chillers at Plant No. 1, providing cooling for the Administration Building, Laboratory Building, Central Generation Building, and Operations Building.

The engines employ a modular design with one interchangeable Power Head per cylinder. OC San purchased 16 spare Power Heads as part of an earlier project to rebuild its engines. That earlier rebuild contractor failed to deliver a working rebuilt engine partially due to out of specification parts. OC San issued an initial Purchase Order for \$72,614.40 to Cooper Machinery Services (the Original Equipment Manufacturer) on June 30, 2021 to inspect the 16 spare Power Heads and four cam shafts provided by the unsuccessful rebuild contractor and provide an inspection report, and a quote if repairs were needed. The cam shafts were determined to meet the Original Equipment Manufacturer specifications.

## **RELEVANT STANDARDS**

- 24/7/365 treatment plant reliability
- Maintain a proactive asset management program
- Comply with environmental permit requirements

## **PROBLEM**

The Cooper Machinery Services inspection report identified needed repairs with the Power Heads that will result in additional costs.

## **PROPOSED SOLUTION**

Approve an additional \$60,300.60 to Purchase Order 146032-OS for Cooper Machinery Services to repair the 16 spare Power Heads and return them to the original equipment manufacturer specifications and industry standards.

## **TIMING CONCERNS**

Spare Power Heads are needed to perform corrective maintenance and currently there are no spare heads available that will facilitate quick return to service of critical engines in the event of a failure of a Power Head.

The 16 spare Power Heads were purchased as spares compatible with all eight Cooper Bessemer engines. These spare Power Heads are used for preventative and corrective maintenance, they speed up top-end overhauls of an engine and allow for timely replacement of an individual failed unit.

## **RAMIFICATIONS OF NOT TAKING ACTION**

Failure to maintain adequate spare parts will potentially result in an extended equipment outage of a critical asset and impact the reliability of necessary power generation and resource recovery within the Central Generation facilities at Plant Nos. 1 and 2.

## **PRIOR COMMITTEE/BOARD ACTIONS**

N/A

## **ADDITIONAL INFORMATION**

Staff intends to pursue recovery of these repair costs from the original supplier. A 10% contingency

is requested in the event of unforeseeable repairs and expenses.

**CEQA**

N/A

**FINANCIAL CONSIDERATIONS**

This request complies with authority levels of the OC San Purchasing Ordinance. This recommendation will be funded under the Repair and Maintenance line item for Operation and Maintenance Department (Budget Update Fiscal Year 2021-2022, Page 45). The available funding is sufficient for this action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
03/02/2022	\$132,915	\$13,292 (10%)

**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:*

N/A