



Agenda Report Details (With Text)

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Title: REPLACE SERVER AND STORAGE INFRASTRUCTURE FOR PLANT NO. 1 INDUSTRIAL CONTROL SYSTEM
Sponsors: Lorenzo Tyner
Indexes:
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Date	Ver.	Action By	Action	Result
3/9/2022	1	ADMINISTRATION COMMITTEE		

FROM: James D. Herberg, General Manager
Originator: Lorenzo Tyner, Assistant General Manager

SUBJECT:

REPLACE SERVER AND STORAGE INFRASTRUCTURE FOR PLANT NO. 1 INDUSTRIAL CONTROL SYSTEM

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Purchase Order to ePlus Technology, Inc. for the purchase of software, hardware, and services to implement and configure the Nutanix metro clusters for Plant No. 1 Industrial Control System, Specification No. E-2022-1300BD, for a total amount not to exceed \$560,195, plus applicable sales tax and shipping; and
- B. Approve a contingency in the amount of \$56,019 (10%).

BACKGROUND

Orange County Sanitation District's (OC San) current server and storage computing infrastructure for the Industrial Control Systems (ICS) network has reached its end of life. Staff has been incrementally replacing server and storage at the two Plants for the ICS network and this is the last of the replacements. Staff is recommending modernizing the remaining antiquated storage and server infrastructure with a Hyper Converged Infrastructure (HCI) solution called Nutanix to replace the server and storage systems in the ICS network to be compatible with the prior replacements.

The Nutanix HCI solution is a merger of computing and storage systems. It provides a simple

interface to run workloads, providing a single interface to manage and allocate computer resources. The storage and computer nodes act as one highly reliable pool of resources. Should one node go down, the rest will remain unaffected. This resilience is key to ensuring connectivity and uptime. Nutanix HCI can also be scaled out by adding nodes to match resource demand.

RELEVANT STANDARDS

- 24/7/365 treatment plant reliability
- Ensure the public's money is wisely spent
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard
- Protect OC San assets

PROBLEM

The current server and storage infrastructure of the ICS network is hosted on obsolete hardware. The current infrastructure is not reliable, scalable, and does not provide the redundancy or availability for the current server and storage needs. The obsolete hardware is becoming less reliable and replacement parts are not available from the manufacturer. In addition, the current storage solution has been discontinued by the manufacturer and is no longer supported.

PROPOSED SOLUTION

To properly maintain the ICS network, the Information Technology (IT) division and Process Control Integration (PCI) request to purchase the Nutanix HCI solution and related professional services to install and configure the system. The proposed Nutanix HCI system is consistent with existing systems in other areas of the ICS network.

TIMING CONCERNS

Proper maintenance and performance of the ICS network is imperative for the continued support and safety of OC San operations.

RAMIFICATIONS OF NOT TAKING ACTION

A decision not to purchase the Nutanix HCI solution would result in continued inefficiencies, limitations in deploying new technologies, the inability to provide high availability, and a degradation in service as hardware fails.

PRIOR COMMITTEE/BOARD ACTIONS

July 2021 - Board approved a Purchase Order to ePlus Technology Inc. for Specification No. E-2021-1253BD for IT Server Hardware for Outfall Low Flow Pump Station, Contract No. J-117B, for a total amount of \$793,882.96, plus applicable sales tax and freight.

September 2020 - Administration Committee approved a Professional Services Agreement to ePlus Technology Inc. for the procurement of software, hardware, and services to implement and configure the Hyper Converged Infrastructure, Specification No. CS-2020-1141BD, for a total amount not to

exceed \$177,950 and approved a contingency in the amount of \$17,795 (10%).

ADDITIONAL INFORMATION

A Notice Inviting Bids was issued on January 18, 2022 via PlanetBids. Bids were due on February 15, 2022. OC San received four (4) bids valid for 180 calendar days from the bid opening date. One bid is noted as non-responsive due to non-notarized Non-Collusion Affidavit Form.

The following is a list of the firms that submitted a bid:

Company Name	Bid	Determination
ePlus Technology, Inc.	\$560,194.41	Responsive
Nth Generation Computing, Inc.	\$669,666.56	Responsive
Mvation Worldwide Inc	\$676,176.86	Responsive
Axelliant LLC	\$677,042.66	Non-Responsive

Based on these results, staff recommends approving a Purchase Order to ePlus Technology. The term of this Purchase Order will begin upon the effective date of the Notice to Proceed.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San’s Purchasing Ordinance. This item has been budgeted. (FY2020-21 & 2021-22 Budget, Section 8, Page 49, Information Technology Capital Program (M-MC-IT)).

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
03/23/2022	\$560,195	\$56,019

ATTACHMENT

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

N/A