



- Board of Directors
Engineering and Operations Committee

2/12/2013 Board Meeting

7-7

Subject

Appropriate \$920,000; and award \$490,292.26 contract to Global Power Group, Inc., to replace the data center Uninterruptible Power Supply at Metropolitan's Headquarters Building (Approp. 15376)

Executive Summary

This action awards a contract to replace the Uninterruptible Power Supply (UPS) in the data center at Metropolitan's Headquarters Building in Los Angeles. Replacement of the UPS is needed to protect the data center from potential power disruption and equipment failure due to power spikes or surges.

Timing and Urgency

The existing 14-year-old UPS at Metropolitan's Headquarters Building has reached the end of its service life and is becoming less reliable. The UPS system's main function is to prevent fluctuations in electric power that could cause equipment failures, and to serve as a backup power supply in case of loss of utility power. A UPS system differs from an emergency standby generator in that it provides near-instantaneous power during the interim period prior to the standby generator coming on-line, or until its connected equipment is properly shut down. Replacement of the UPS is needed to reduce the potential for service disruption, loss of critical data, or damage to Metropolitan's data systems, which support financial operations, emergency response, communications, water operations, and engineering functions.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is categorized as an Infrastructure Upgrade project. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2012/13.

Details

Background

Metropolitan's data center, which was constructed in 1998, is housed in a 4,000-square-foot area within the Union Station Headquarters Building in Los Angeles. The data center acts as Metropolitan's centralized repository for data processing, storage, and network communications for the following key systems:

- Financial - Water billing, which calculates customer water usage and generates bills.
- Emergency Response - Two-way radio system.
- Water Operations - Supervisory Control & Data Acquisition (SCADA) and Automated Meter Reading (AMR) systems, which are used to control and meter water deliveries throughout Metropolitan's service area.
- Water Quality - Laboratory Information Management System (LIMS), which manages and tracks water sampling and testing results.
- Engineering - Programs that monitor and measure seepage and displacement of dams.

Many of these systems operate 24 hours per day, seven days per week, and therefore have a required return-to-service time from immediate to within the first two hours of utility power loss.

The UPS is a critical component of the data center, and is located in its own room within the data center. It continuously protects computers, servers, network storage devices, telecommunications equipment, and other electronic devices from power disruptions such as power surges or spikes, which could cause damage to equipment and loss of critical data. The UPS also provides emergency electrical power when the utility power is lost. It provides power to the data center until the emergency generator can be activated, allowing crucial systems to be correctly powered down.

UPS systems typically have a service life of 10-15 years. The data center's current UPS is about 14 years old. Although the equipment has performed well, it is nearing the end of its service life and has become less reliable. In July 2011, Metropolitan's Board authorized final design to replace the data center's UPS with a new system featuring built-in redundancy. Final design has been completed, and staff recommends proceeding with construction at this time.

Planned construction activities include removal of the existing UPS, installation of a new UPS system within the existing UPS room, installation of new electrical equipment such as bypass switches and terminal boxes, modification of existing power distribution equipment including rerouting of electrical conduits and cables, modification of the Headquarters Building's automation system, and modification of the UPS room's existing sub-floor steel frames to accommodate the new UPS layout. In addition, the UPS room's air conditioning ductwork will be modified to improve air circulation and provide cooling system redundancy. A temporary UPS system will be installed to sustain the data center functions while the new system is being constructed and tested. The new UPS system will consist of parallel individual plug-in power and battery modules that can be stacked on top of each other inside the UPS frame. The new system will be more efficient and will allow for future expansion.

Uninterruptible Power Supply Replacement – Construction (\$920,000)

Specifications No. 1718A for the Headquarters Data Center UPS Upgrade project was advertised for bids on November 6, 2012. As shown in [Attachment 2](#), 13 bids were received and opened on December 19, 2012. The low bid from Global Power Group, Inc., in the amount of \$490,292.26, complies with the requirements of the specifications. The 12 higher bids ranged from \$519,000 to \$756,655, while the engineer's estimate was \$640,000. Staff investigated the difference between the engineer's estimate and the low bids, and attributes the difference to the current highly competitive bidding environment, lower-than-expected equipment costs, and the low bidder's plan to salvage components for resale to others. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 20 percent of the bid amount. Global Power Group, Inc. is an SBE firm, and thus achieves 100 percent participation.

This action appropriates \$920,000 and awards a \$490,292.26 contract to Global Power Group, Inc. for replacement of the UPS system in the Headquarters Building's data center. In addition to the amount of the contract, the requested funds include: \$176,000 for Metropolitan forces to perform power and equipment switching, and to establish clearances; \$95,000 for construction inspection; \$38,000 for review of submittals by Metropolitan staff, and technical support during construction by the design consultant, Lee & Ro, Inc., as discussed below; \$45,000 for permitting with the city of Los Angeles, contract administration, and project management; \$19,000 for preparation of record drawings; and \$56,708 for remaining budget. The total cost of construction for this project is \$666,292, which includes \$490,292 for the construction contract and \$176,000 for work by Metropolitan forces.

Metropolitan staff will perform inspection of the construction. For this project, the anticipated cost of inspection is approximately 14.2 percent of the total construction cost. Engineering Services' goal for inspection of construction contracts less than \$3 million is 9 to 15 percent.

Technical Support by Lee & Ro, Inc. – No Action Required

Lee & Ro, Inc. performed the final design of the Headquarters Building's data center UPS upgrade. As the Engineer of Record, Lee & Ro is recommended to provide technical support during construction. These activities will include review of specialized equipment submittals, responding to requests for information, advising staff on technical issues as they may arise, and preparation of record drawings. Lee & Ro was selected through a competitive process via Request for Qualifications (RFQ) No. 927, and the work will be performed under an existing professional services agreement. No amendment to the existing agreement is required. For this agreement, Metropolitan has established an SBE participation level of 18 percent. The estimated cost for these services is \$42,000.

Summary

This action appropriates \$920,000 and awards a construction contract to replace the UPS in the data center at Metropolitan's Headquarters Building in Los Angeles. This work has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2012/13 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

This work will be performed under the Information Technology System Infrastructure Program (Appropriation No. 15376), which was initiated in fiscal year 2001/02. Other projects authorized under Appropriation No. 15376 include the Two-Way Radio Replacement; IT Network Replacement; Enterprise Infrastructure Upgrade; IT Recovery Facility Environmental Upgrades; and the Communication Infrastructure Reliability Upgrade. With the present action, the total amount appropriated for this program will increase from \$35,481,000 to \$36,401,000.

Project Milestone

January 2014 – Completion of construction of the UPS system upgrade in the Headquarters Building's data center

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The project was previously determined to be categorically exempt under the provisions of CEQA and State CEQA Guidelines. The Board found this project to be exempt under Class 1, Section 15301; Class 2, Section 15302; Class 3 and Section 15303 of the State CEQA Guidelines on July 12, 2011. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current board action, there are no substantial changes proposed to the project since the original NOE was filed. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act with regards to this proposed action.

The CEQA determination is: Determine that the proposed project has been previously addressed in the 2011 NOE (Class 1, Section 15301; Class 2, Section 15302; Class 3 and Section 15303 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

CEQA determination for Option # 2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$920,000; and
- b. Award \$490,292.26 contract to Global Power Group, Inc. to replace the data center Uninterruptible Power Supply at Metropolitan’s Headquarters Building.

Fiscal Impact: \$920,000 in capital funds under Approp. 15376

Business Analysis: This option will enhance reliability of the data center UPS system, which is used to protect computers, servers, and telecommunication equipment at Metropolitan’s Headquarters Building.

Option #2

Do not award the construction contract and re-advertise in an attempt to receive more favorable bids.

Fiscal Impact: Unknown

Business Analysis: This option may or may not result in lower bids, and would delay improvements which will minimize the risk of loss of critical data, damage to equipment, and associated interruptions in the operation of key business applications.

Staff Recommendation

Option #1


 _____ 1/22/2013
 Gordon Johnson Date
 Manager/Chief Engineer
 Engineering Services


 _____ 1/29/2013
 Jeffrey Kightlinger Date
 General Manager

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12620904

Financial Statement for ITSP Infrastructure Program

A breakdown of Board Action No. 15 for Appropriation No. 15376 to replace the data center Uninterruptable Power Supply at Metropolitan’s Headquarters Building¹ is as follows:

	Previous Total Appropriated Amount (July 2011)	Current Board Action No. 15 (Feb. 2013)	New Total Appropriated Amount
Labor	\$ 16,902,501 ²	\$ -	\$ 16,902,501
Studies & Investigations	97,500	-	97,500
Final Design	87,600	-	87,600
Owner Costs (Program mgmt., permitting, shutdown planning)	102,900	45,000	147,900
Submittals Review & Record Drwgs	-	19,000	19,000
Construction Inspection & Support	-	95,000	95,000
Metropolitan Force Construction	-	153,000	153,000
Materials & Supplies	11,401,989	13,000	11,414,989
Incidental Expenses	159,493	10,000	169,493
Professional/Technical Services	5,499,608	38,000	5,537,608
Equipment Use	43,231	-	43,231
Contracts	269,266	490,292	759,558
Remaining Budget	916,912 ²	56,708	\$ 973,620
Total	\$ 35,481,000	\$ 920,000	\$ 36,401,000

Funding Request

Program Name:	ITSP Infrastructure Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15376	Board Action No.:	15
Requested Amount:	\$ 920,000	Capital Program No.:	15376-I
Total Appropriated Amount:	\$ 36,401,000	Capital Program Page No.:	298
Total Program Estimate:	\$ 46,983,000	Program Goal:	Reliability & Efficiency

¹ The total amount expended to date on the Headquarters Building Data Center Uninterruptible Power Supply Replacement project is approximately \$290,000.

² Includes reallocation of \$786,570 from Remaining Budget for the Two-Way Radio System Upgrade, IT Network Upgrade and Data Center UPS projects, and reallocation of \$22,130 to Remaining Budget from projects completed under budget.

The Metropolitan Water District of Southern California
Abstract of Bids Received on December 19, 2012 at 2:00 P.M.
Specifications No. 1718A

Metropolitan's Headquarters Building Data Center Uninterruptible Power Supply Upgrade

The work consists of removal of the existing UPS equipment; procurement, installation and testing of a new UPS; installation of a temporary UPS and electrical equipment; and modification of existing power distribution equipment, building automation system, and UPS room air conditioning ductwork.

Engineer's estimate: \$640,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Global Power Group, Inc., Lakeside, CA	\$ 490,292.26	\$ 490,292.26	100	Yes
Waisman Construction Inc., Canoga Park, CA	\$ 519,000	-	-	-
Unispec Construction, Inc., San Pedro, CA	\$ 524,000	-	-	-
Technion Contractors TCI Inc., Northridge, CA	\$ 578,000	-	-	-
RBT Electric, Inc., East Irvine, CA	\$ 603,105	-	-	-
Hoffman Management & Construction Corporation, Los Angeles, CA	\$ 616,257.60	-	-	-
Minako America Corporation dba Minco Construction, Gardena, CA	\$ 638,700	-	-	-
Total Concept Sales, Inc., La Crescenta, CA	\$ 639,700	-	-	-
Steiny and Company, Inc., Los Angeles, CA	\$ 652,000	-	-	-
ODC Engineering & Technology, Agoura, CA	\$ 657,000	-	-	-
Mel Smith Electric, Inc., Stanton, CA	\$ 682,000	-	-	-
Power Technology Electric Co., Inc., Los Angeles, CA	\$ 698,000	-	-	-
Robnett Electric, Inc., Los Angeles, CA	\$ 756,655	-	-	-

¹ SBE (Small Business Enterprise) participation set at 20 percent

Distribution System

