



Metro

Metropolitan Transportation Authority

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REVISED

OPERATIONS COMMITTEE

JANUARY 17, 2008

AD HOC CLIMATE CHANGE AND SUSTAINABILITY COMMITTEE

JANUARY 23, 2008

**SUBJECT: METRO SUPPORT SERVICES CENTER SOLAR ENERGY AND
ELECTRICITY CONSERVATION INFRASTRUCTURE PROJECT**

**ACTION: AWARD CONTRACT TO CHEVRON ENERGY SOLUTIONS COMPANY TO
DESIGN, CONSTRUCT, AND OVERSEE MAINTENANCE OF SOLAR
ENERGY GENERATION AND ENERGY CONSERVATION EQUIPMENT AT
THE METRO SUPPORT SERVICES CENTER**

RECOMMENDATION

- A. Award an 11-year Public/Private Partnership agreement, Contract No. OP33440678, to Chevron Energy Solutions to design, build and provide maintenance oversight of a Solar Energy Generation and Energy Conservation Project at the Metro Support Services Center (MSSC), in an amount not-to-exceed \$16,908,332, inclusive of \$500,936 for ten years of maintenance oversight;
- B. Adopt a resolution authorizing LACMTA to enter into a Master Equipment Lease Agreement to finance project cost in an amount not to exceed \$16,407,396 plus capitalized interest that may accrue for up to 18 months during the installation period, followed by a lease repayment term of up to 120 months with Bank of America, Public Capital Corporation of Santa Fe, NM, as the lending source provided by Chevron Energy Solutions Company;
- C. Establish a life-of-project (LOP) budget for this project of \$21,143,000, which is inclusive of all monthly financing payments for the ten-year life of the financing, staff labor for design review and construction oversight, and \$500,936 for maintenance oversight over the life of the 11-year performance contract; and
- D. Amend the FY08 Facilities-Operations budget, cost center 3344, to add one full-time equivalent (FTE) position for a Facilities Support Technician (FST) for maintenance and operation of the solar panels and energy conservation equipment at the MSSC, as well as the solar panel systems previously installed at Divisions 8, 15, and 18.

RATIONALE

During discussion of the Division 18 Solar Generation project at the October 2006 Board meeting, it was requested that staff report back to the Board with a three-year comprehensive plan to install solar panels on all bus and rail facilities. Staff responded to that motion in March 2007 with several recommendations on the implementation of agency-wide solar installations. The primary recommendation of staff's report was that due to the high cost of solar panel installation, and the current unmet capital needs of the agency, it would be prudent to explore alternative financing models that could be employed to further the Agency's solar installation and sustainability goals, without the high upfront capital costs realized from a straight capital purchase similar to the Divisions 8, 15, and 18 projects. Staff specifically committed to explore two types of contracting mechanisms, performance contracting and power purchase agreements. This project uses the performance contracting approach, which was the first scenario staff committed to explore. The second procurement approach, power purchase agreements, will commence with an RFP selection process in approximately June 2008.

The use of a Public/Private Partnership for this project addresses staff's concerns by leveraging private financing, while maintaining a sound return on investment. Based on a thirty year expected life of the energy systems to be installed, at least \$1.4 million is the expected Return on Investment over the life of the project. This net present value analysis will improve dramatically if electricity rates increase above a very conservative 2.5% annually. Moreover, the solar energy to be created, as well as the electricity to be conserved by the project are guaranteed by the Contractor over the first ten years of the project.

Background

The first contracting scenario staff elected to explore was a performance contracting method, using a public/private partnership approach, at the Metro Support Services Center (MSSC) located adjacent to headquarters. The MSSC was constructed in 1985 and performs central maintenance, painting, restoration, and engine rebuilds for nearly 2,700 transit buses. Aside from bus maintenance and rebuild functions, the facility also houses administrative offices, Operations Central Instruction, Stops and Zones, and the Central Warehouse for all operations.

The yearly electricity cost for the MSSC is approximately \$1.1 million, and nearly 75% of the energy costs (natural gas and electricity) are for lighting, compressors, and heating, ventilation, and air conditioning (HVAC) equipment. Based on the results of energy audits, staff determined it could "green" the facility by installing new lighting equipment, replacing HVAC equipment, optimizing compressed air systems, installing energy management systems and state of the art lighting controls, and constructing a photovoltaic solar panel roof system totaling approximately 1 megawatt in size. These upgrades would immediately lower electricity bills at the MSSC by approximately 46% (from \$1,093,839/year to approximately \$550,000/year). In addition, staff had already secured a rebate reservation from the Gas Company for this specific project, which would help to reduce the overall cost of such a project. Based on the projections of the electricity savings and the existence of rebates, staff determined that this project was in LACMTA's best interest to pursue, not only

for the costs that could be saved, but also because it is compliant with our Energy and Sustainability Policy and is a major step in reducing our carbon emissions and reliance on traditional coal-fired energy.

In order to negotiate a Public/Private Partnership, staff issued an RFP in June 2007, under California Government Code 5956, which permits the agency to enter into this type of capital improvement project using private funding sources. The procurement is a qualification based solicitation, and technical and price responses to the RFP were received in August, 2007. Negotiations were initiated with Chevron Energy Solutions (CES), the only respondent, based on review of the technical response and validation of defined performance qualifications.

Financing

CES selected Bank of America to provide the capital financing for the energy project. Bank of America will provide a tax-exempt equipment lease financing with a capitalized interest period of up to 18 months plus a repayment term of up to 120 months. The use of a tax-exempt financing allows the lender to provide a very attractive interest rate, which improves our return on investment compared to a taxable commercial lease. The lease will be a secured lease requiring collateral. Because the MSSC's buildings were previously involved in a taxable lease financing only the photovoltaic system, which is not a replacement of an existing system or component, may incur a lien and be utilized as collateral for the current lease. Any collateral required in addition to the photovoltaic system will not be due until conclusion of the installation period. Immediately after conclusion of the installation period, the Agency intends to prepay a portion of the lease balance equal to the amount of rebates to be received. The prepayment will significantly reduce the lease balance, but is expected to leave a balance of additional collateral required of \$2 to \$3 million. The collateral may be in the form of either equipment or real estate.

Rebates

As part of this proposed project, approximately \$5.39 million in incentives and rebates have been secured from the City of Los Angeles Department of ~~Public Works of Water and Power~~, the Gas Company, and the South Coast Air Quality Management District (SCAQMD). These incentive funds represent approximately one-third of the value of the construction and installation costs for the project, and will be paid by the agencies upon satisfactory completion of the project. Further, CES is contractually obligated to deliver on these incentives, since the contract with LACMTA provides that CES make up for any shortfalls in the incentive funds below \$5.39 million. When the rebates are received by LACMTA upon completion of the project, the \$5.39 million in funds will be immediately paid to Bank of America as a pre-payment on the financing, subsequently lowering the total amount of dollars financed by \$5.39 million.

Scope of Work

The scope of work for this project as negotiated with CES requires the Contractor to design, develop, supply, construct, test and cause to maintain (using LACMTA contract labor) a

Solar Photovoltaic System and Energy Efficiency/Conservation Measures such as replaced Lighting, HVAC and Air Compressors at the MSSC facility. Specifically, the scope includes:

- Completion of a minimum 1,000 kW (1 megawatt) roof-top mounted photovoltaic solar generation system
- Installation of an Energy Management System (EMS) that will provide Web-based direct digital control of temperature control for all new HVAC units, scheduling and monitoring of HVAC units (Facility HVAC Audit), and monitoring and control of all interior large area lighting systems
- Replacement of over 4,000 lighting fixtures within the MSSC with new state-of-the-art lighting systems (such as 2nd and 3rd Generation T-8's or LED's)
- Replacement of three older and inefficient packaged HVAC units with three new energy-efficient HVAC units
- Installation of two new air compressors and optimization of the existing compressed air system to match the actual compressed air demands of the MSSC
- Prior to system acceptance, the Contractor shall provide testing for the grid-connected photovoltaic systems and the new HVAC, lighting, and compression equipment to demonstrate that the system is functionally operative and meets the design requirements. The Contractor shall also prove that the completed facility meets all committed energy production guarantees for the Solar Photovoltaic System and validate that Energy Efficiency/Conservation Measures at the MSSC meet the energy savings commitments made by the Contractor.
- Contractor shall provide training and oversight of all operations and maintenance tasks related to the new equipment; however, LACMTA is responsible for all operations and maintenance of the installed equipment.
- The contractor is held accountable for non-performance by guaranteeing all energy generation and energy savings. The contract provides for monetary payments to be made to LACMTA if the contractor fails to achieve the energy guarantees. If energy production and energy savings targets are not achieved at specific intervals throughout the life of the contract, the contractor shall pay LACMTA for every kilowatt hour not generated or saved at a kilowatt hour rate that features escalation.

FINANCIAL IMPACT

This action will establish a life-of-project budget of \$21,143,000 for Project Number 202252, MSSC Energy Efficiency and Solar Generation Project. The LOP budget is inclusive of all monthly finance payments required by LACMTA's contract with Bank of America, staff labor for design review and construction oversight, the yearly cost of CES' maintenance oversight, and all rebates received by LACMTA and subsequently distributed to Bank of America. The LOP is more than the contract price of \$16,908,332, because the LOP reflects that \$5.39 million in rebate funds will be received by LACMTA at the completion of the project and paid out to Bank of America to pay down the capital costs. As shown on Attachment B, LACMTA funds used for this project will not exceed \$15,750,000.

The proposed project will be financed over a period of ten years, and since this is a capital lease, the monthly finance payments will be made from capital funds. No finance payments will be made until completion of construction, so payments will not start until approximately

February 2009. For finance payments from FY09 until the end of the ten year finance period, the finance payments will be budgeted as a part of the yearly capital budget process. The cost of the requested FTE is estimated to be \$100,000 per year including fringe benefits. Since this is a multi-year contract, the Cost Center Manager and Chief Operations Officer will be responsible for budgeting the cost in future years.

ALTERNATIVES CONSIDERED

The energy conservation and solar generation facilities at the MSSC could be designed and constructed by LACMTA as a capital construction project, similar to the solar facilities already constructed at Divisions 8, 15, and 18. This alternative is not recommended for the following reasons:

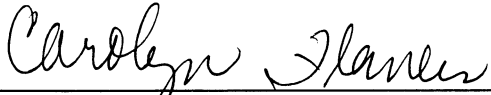
- This project will further expand our solar generation portfolio with no upfront capital costs, saving scarce funding for other infrastructure improvement projects required to operate the bus and rail system.
- Expedited completion and guaranteed cost: The performance contracting form of services contract ensures that there will be no cost overruns. In addition, by allowing the contractor to design and build to its specifications, subject to our performance specifications, six months can be reduced from the construction schedule.
- The contract provides for performance guarantees if energy production and energy savings targets are not achieved throughout the life of the contract.
- Cost savings: Award of this contract was recommended by staff only after a net present value lease/buy analysis demonstrated that savings could be realized from the public/private partnership.

Another alternative is to not complete this project at all and continue the status quo. This alternative is not recommended, since this project is compliant with our Sustainability and Energy Policy. Staff believes that in this volatile energy market with looming carbon reduction regulations, embracing sustainable and renewable energy sources is a primary pathway towards gaining control of energy costs, reducing our dependence on fossil fuels, and reducing our carbon emissions footprint. Further, staff believes that this performance contracting approach is an extremely beneficial tool to embrace renewable energy generation and energy conservation without spending large amounts of capital dollars that could otherwise be used to further our primary agency goals of providing mobility to Los Angeles County.

ATTACHMENTS

- A. Procurement Summary
- A-1. Procurement History
- A-2. List of Subcontractors
- B. MSSC Solar Energy and Electricity Conservation Project: Life of Project Budget
- C. Resolution Authorizing Execution of Master Equipment Lease/Purchase Agreement

Prepared by: Tim Lindholm, Director of Capital Projects, Facilities-Operations
Victor Ramirez, Contract Administration Manager
Michael J. Smith, Assistant Treasurer



Carolyn Flowers
Chief Operations Officer



K.N. Murthy
Deputy Chief Capital Management
Officer



Roger Snoble
Chief Executive Officer

**ATTACHMENT A
PROCUREMENT SUMMARY**

**METRO SUPPORT SERVICES CENTER SOLAR ENERGY AND ELECTRICITY
CONSERVATION INFRASTRUCTURE PROJECT**

1.	Contract Number: OP33440678		
2.	Recommended Vendor: Chevron Energy Solutions Company		
3.	Cost/Price Analysis Information:		
	A. Proposed Price: \$17,894,042	Recommended Price: \$16,908,332	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Firm Fixed Construction, with Not-To-exceed follow-on Services		
5.	Procurement Dates:		
	A. Issued: June 4, 2007		
	B. Advertised: June 5, 2007		
	C. Pre-proposal Conference: June 12, 2007		
	D. Proposals Due: August 20, 2007		
	E. Pre-Qualification Completed: October 17, 2007		
	F. Conflict of Interest Form Submitted to Ethics: December 10, 2007		
6.	Small Business Participation:		
	A. Proposal Goal: 20% SBE	Date Small Business Evaluation Completed: September 6, 2007	
	Small Business Commitment: 0% SBE (Details are in Attachment A-2)		
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: 20	Bids/Proposals Picked up and/or Downloaded: 52	Bids/Proposals Received: 1
8.	Evaluation Information:		
	A. <u>Bidders/Proposers Names:</u> Chevron Energy Solutions	<u>Proposal Amount:</u> \$17,894,042	<u>Final Offer Amount:</u> \$16,908,332
	B. Evaluation Methodology: Details are in Attachment A-1.C		
9.	Protest Information:		
	A. Protest Period End Date: January 22, 2008		
	B. Protest Receipt Date: TBD		
	C. Disposition of Protest Date: TBD		
10.	Contract Administrator: Victor Ramirez	Telephone Number: 213-922-1059	
11.	Project Manager: Timothy Lindholm	Telephone Number: 213-922-7297	

**ATTACHMENT A-1
PROCUREMENT HISTORY**

**METRO SUPPORT SERVICES CENTER SOLAR ENERGY AND ELECTRICITY
CONSERVATION INFRASTRUCTURE PROJECT**

A. Background on Contractor

Chevron Energy Solutions (CES), a division of Chevron, USA is an Energy Services Company operating in Pasadena, CA. CES has completed similar projects valued in excess of \$200 million over the last five years. Their most recent clients include the Los Angeles Community College District, Mt. San Antonio Community College, Florida Department of Corrections, and LACMTA. The project at Division 18 was completed satisfactorily.

B. Procurement Background

LACMTA issued a Public/Private Partnership solicitation in accordance with Government Code 5956, which allows for energy producing infrastructure and other capital improvements to be awarded through a competitive negotiation process (RFP). RFP No. OP33440678 was issued on June 4, 2007, and only one offer was received on August 20, 2007. The contract period of performance is expected to be for eleven years. The design, construction, installation and testing elements of the project are expected to be completed within the first year of the contract. The energy measurement and verification services will continue for ten years after the system becomes operational.

C. Evaluation of Proposals

The only proposal received was from CES, which was evaluated for technical qualifications, responsiveness and responsibility in accordance with Procurement Policies and Procedures. CES was found to be technically qualified, responsive and responsible.

The Diversity and Economic Opportunity Department established a 20% SBE goal for this procurement. CES did not list SBE participation. However, CES successfully passed the Good Faith Efforts evaluation and was determined responsive to the SBE Program requirements.

D. Price and Net Present Value Analysis

Department

The recommended construction price has been determined to be fair and reasonable based upon the Proposer's expectation that adequate competition existed within the RFP solicitation process, and as a result of a price analysis performed on CES's proposed construction solution. LACMTA's price analysis focused on the construction and installation of equipment proposed for photovoltaic, lighting, energy management, air compression and HVAC systems. This price analysis performed by our Estimating found only a 7% difference in its recommended price for construction.

The entire project was further subjected to a net present value analysis to determine if the construction, maintenance oversight and finance costs were reasonable from an investment standpoint. A \$1.4 million return on investment over the 30 year life of the equipment is expected to be recovered based on a net present value discount factor of 4.03%. The project offers a combination of a fair construction price and a sound rate of return of public funds.

**ATTACHMENT A-2
LIST OF SUBCONTRACTORS**

**METRO SUPPORT SERVICES CENTER SOLAR ENERGY AND ELECTRICITY
CONSERVATION INFRASTRUCTURE PROJECT**

Prime Contractor- Chevron Energy Solutions Company

Small Business Commitment

Other Subcontractors

None

Total Commitment 0% SBE

ATTACHMENT B

MSSC SOLAR ENERGY AND ELECTRICITY CONSERVATION PROJECT: LIFE OF PROJECT BUDGET

Attachment B

CP 202252 RRC Energy Efficiency & Solar Generation Project
Funding/Expenditure Plan

	FY09	FY10	FY11	FY12	FY13+	Total	% of Total
Uses of Funds							
Project Administration	\$85,000	\$85,000	\$85,000	\$85,000	\$186,661	\$526,661	2.50%
Design/Specs/Const. Mgmt.	\$30,000	\$62,550	\$62,550	\$62,550	\$282,750	\$500,400	2.40%
Construction/Rehab/Renovation	\$1,276,074	\$1,717,740	\$1,717,740	\$1,717,740	\$7,729,830	\$14,159,124	67.00%
Prepayment to BofA		\$5,393,000				\$5,393,000	25.50%
Contingency	\$50,000	\$35,000	\$35,000	\$35,000	\$408,815	\$563,815	2.60%
Total Project Cost	\$1,441,074	\$7,293,290	\$1,900,290	\$1,900,290	\$8,608,056	\$21,143,000	100%
Sources of Funds							
Proj Revenue: Subsidies Received		\$5,393,000				\$5,393,000	26.00%
TDA	\$1,441,074	\$1,900,290	\$1,900,290	\$1,900,290	\$8,608,056	\$15,750,000	74.00%
Total Project Funding	\$1,441,074	\$7,293,290	\$1,900,290	\$1,900,290	\$8,608,056	\$21,143,000	100%

ATTACHMENT C

RESOLUTION AUTHORIZING EXECUTION OF MASTER EQUIPMENT LEASE/
PURCHASE AGREEMENT

RESOLUTION OF THE BOARD OF DIRECTORS OF THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY AUTHORIZING THE EXECUTION AND DELIVERY OF A MASTER EQUIPMENT LEASE/PURCHASE AGREEMENT IN CONNECTION WITH THE FINANCING OF SOLAR ENERGY AND ENERGY CONSERVATION PROJECTS AND AUTHORIZING THE EXECUTION OF NECESSARY DOCUMENTS AND CERTIFICATES AND RELATED ACTIONS

WHEREAS, the Los Angeles County Metropolitan Transportation Authority (LACMTA) is a public body corporate and politic, organized and existing under and by virtue of the laws of the State of California;

WHEREAS, the LACMTA has authorized pursuant to California Government Code Sections 5956 through 5956.10, inclusive (the "Infrastructure Financing Act") the development of a Solar Energy and Energy Conservation Infrastructure Project for its Metro Support Services Center (the "Project");

WHEREAS, the Board of Directors of the LACMTA now desires, pursuant to the Infrastructure Financing Act and California Public Utilities Code Sections 130050.2 et. seq., including Sections 130500 through 130554, to authorize the officers and staff of the LACMTA to take such further actions, including the negotiation, execution and delivery of such documents, agreements and certificates as shall be necessary and appropriate to finance the Project;

WHEREAS, the LACMTA and Banc of America Public Capital Corp., a Kansas Corporation ("Lessor") will enter into a Master Equipment Lease/Purchase Agreement and an Acquisition Fund and Control Account Agreement (collectively, the "Master Equipment Lease/Purchase Agreement") pursuant to which the LACMTA will provide financing for the Project in an aggregate principal amount not to exceed \$17,500,000 inclusive of up to \$1,100,000 of interest that may accrue during the construction period and prior to commencement of the lease payments;

WHEREAS, as security for the payments under the Master Equipment Lease/Purchase Agreement, the LACMTA will grant a security interest in equipment portions of the Project and other appropriate non-Project equipment of the LACMTA to the Lessor; and

WHEREAS, the LACMTA anticipates receiving certain incentive payments with respect to the Project that may be used to prepay lease payments or offset other costs;

NOW, THEREFORE, BE IT RESOLVED, by The Board of Directors of The Los Angeles County Metropolitan Transportation Authority, as follows:

Section 1. All of the recitals herein contained are true and correct and the LACMTA so finds.

Section 2. The issuance of lease purchase obligations in an aggregate principal amount not to exceed \$17,500,000 and proposed form of Master Equipment Lease/Purchase Agreement and the Schedules, Certificates and related documents attached thereto to be dated the date of the initial financing thereunder or a convenient date, by and between Lessor and the LACMTA, as presented to this meeting, is hereby approved. The LACMTA hereby specifically finds and declares that the representations and covenants of the LACMTA set forth in said Master Equipment Lease/Purchase Agreement are true and correct. The Chief Executive Officer of the LACMTA, the Chief Financial Services Officer the LACMTA, the Treasurer of the LACMTA or the Assistant Treasurer, or such other officer of the LACMTA as the Chief Executive Officer of the LACMTA may designate (the "Authorized Officers"), are hereby authorized and directed, for and on behalf of the LACMTA, to execute and deliver to the Lessor the Master Equipment Lease/Purchase Agreement and the Schedules, Certificates and related agreements with respect to the Master Equipment Lease/Purchase Agreement in substantially the forms presented to this meeting, with such insertions and changes therein consistent with the stated terms of this Resolution as such Authorized Officers, with the advice of Bond Counsel and County Counsel, may require or approve, such approval to be conclusively evidenced by execution and delivery thereof. The principal amount (not to exceed \$17,500,000), dates, maturity dates (not to exceed 13 years), interest rates (not to exceed 5%), interest payment dates, series designation, denominations, forms, registration privileges, transfer restrictions, place or places of payment, terms of prepayment, security provisions, assignment of collateral, including collateral other than the Project assets, (to the extent permitted by law), custodian designation and other terms shall be as provided in the Master Equipment Lease/Purchase Agreement and the Schedules, Certificates and related agreements attached thereto, as finally executed.

Section 3. The Authorized Officers and any and all other officers, agents and employees of the LACMTA are hereby authorized and directed to take any and all actions and execute and deliver any and all documents necessary or convenient to consummate the transaction contemplated by this Resolution.

Section 4. Each of the Authorized Officers, acting alone, are hereby authorized and directed to perform any ministerial acts permitted under the Master Equipment Lease/Purchase Agreement, Schedules and related agreements, in each case, with the advice of the County Counsel, which they may deem necessary or advisable in order to consummate and otherwise effectuate and administer the financing of the Program, including accepting equipment, agreeing to substitutions of equipment or security thereunder, receiving incentive payments in connection therewith, providing for prepayments of lease payments or adjusting the amortization period, substituting custodians, agreeing to amendments and acknowledging assignments.

Section 5. All actions heretofore taken by the officers, employees and agents of the Authority with respect to the transactions set forth above are hereby approved, confirmed and ratified.

Section 6. This Resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority on _____, 2007.

Secretary of the Los Angeles County
Metropolitan Transportation Authority

(SEAL)

SECRETARY'S CERTIFICATE

I, _____, Secretary of the Los Angeles County Metropolitan Transportation Authority, do hereby certify that the foregoing is a full, true and correct copy of a resolution duly adopted at a meeting of the Board of Directors of the Los Angeles County Metropolitan Transportation Authority duly held on _____, 2007 of which meeting all of the members of said Board had due notice, and at said meeting said resolution was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

I do hereby further certify that an agenda of said meeting was posted at least 72 hours before said meeting at One Gateway Plaza, Los Angeles, California, a location freely accessible to members of the public, and a brief description of said resolution appeared on said agenda.

I do hereby further certify that I have carefully compared the foregoing copy with the original minutes of said meeting on file and of record in my office; that said copy is a full, true and correct copy of the original resolution adopted at said meeting and entered in said minutes; and that said resolution has not been amended, modified, rescinded or revoked in any manner since the date of its adoption, and the same is now in full force and effect.

Dated: _____, 2007

Secretary of the Los Angeles County
Metropolitan Transportation Authority