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OFFICE OF THE CITY CLERK  
OAKLAND

**CITY OF OAKLAND**  
**AGENDA REPORT**

**2009 JUN 11 PM 8:07**

TO: Office of the City Administrator  
ATTN: Dan Lindheim  
FROM: Public Works Agency  
DATE: June 16, 2009

RE: **Supplemental Report On A Resolution Authorizing The City Administrator To:  
1) Apply For, Accept And Appropriate All Funds Designated For The City Of  
Oakland Under The American Recovery And Reinvestment Act Of 2009  
(Federal Government's "Stimulus Package") Energy Efficiency And  
Conservation Block Grant Formula Allocation Estimated At Three Million Nine  
Hundred Nineteen Thousand Two Hundred Dollars (\$3,919,200.00); And 2)  
Apply For, Accept And Appropriate Rebates, Grants And Incentives For  
Related Energy Projects**

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**SUMMARY**

At the Public Works Committee meeting on June 9, 2009, the Committee directed staff to provide additional information regarding recommended projects for funds through the American Recovery and Reinvestment Act of 2009 ("ARRA" or "Recovery Act") Energy Efficiency and Conservation Block Grant Program ("EECBG Program") Formula Allocation. Additional information requested about energy savings calculations performed on projects considered for EECBG Program funds is included in Attachment A. Additional information requested about previous energy efficiency improvements to City facilities is included in Attachment B.

**FISCAL IMPACT**

This report is supplemental and as such, does not have any additional fiscal impacts to those previously discussed in the report.

**BACKGROUND**

On May 11, 2009, pursuant to the American Recovery and Reinvestment Act of 2009 ("ARRA" or "Recovery Act"), the United States Department of Energy ("DOE" or "Department"), Office of Energy Efficiency and Renewable Energy ("EERE"), Office of Weatherization and Intergovernmental Programs ("WIP"), announced the availability of \$2.8 billion in formula allocation funds available through the Energy Efficiency and Conservation Block Grant Formula Program ("EECBG Formula Program"). The City of Oakland is eligible for a formula allocation of approximately \$3.92 million under the EECBG Formula Program.

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At the end of an input process described in the accompanying Agenda Report, 17 potential projects, totaling \$9.9 million, were identified and considered for EECBG Program funds, using a set of evaluative criteria. Priorities were assigned to projects based on jobs created or retained, energy efficiency savings, shovel-readiness, and meeting City budget needs. Ten projects, totaling \$3.92 million, rose to the top of the list within the available funding amount.

## **KEY ISSUES AND IMPACTS**

### ***Energy Savings Calculations for Considered Projects***

Additional information was requested about energy savings calculations performed on projects considered for Oakland's formulaic allocation of EECBG Program funds. This information is provided in Attachment A.

### ***Previous Energy Efficiency Improvements to City Facilities***

Additional information was requested about previous energy efficiency improvements to City facilities. This information is provided in Attachment B.

## **SUSTAINABLE OPPORTUNITIES**

There are no economic, environmental or social equity opportunities associated with the actions of this report.

## **DISABILITY AND SENIOR CITIZEN ACCESS**

There is no disability and senior citizen access opportunities associated with the actions of this report.

**ACTION REQUESTED OF THE CITY COUNCIL**

Staff recommends that the City Council approve the attached resolution authorizing the City Administrator to: 1) apply for, accept and appropriate all funds designated for the City of Oakland under the ARRA EECBG Formula Program allocation; and 2) apply for, accept and appropriate all rebates, grants and incentives for energy projects related to the EECBG Program.

Respectfully submitted,



Raul Godinez II, P.E.  
Director, Public Works Agency

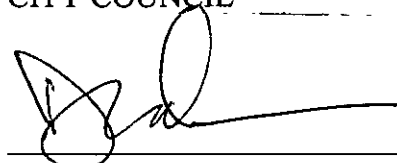
Reviewed by:  
Brooke A. Levin, Assistant Director

Reviewed by:  
Susan Kattchee, Environmental Services Manager

Prepared by:  
Scott Wentworth, Energy Engineer  
Environmental Services Division

Attachment A  
Attachment B

APPROVED AND FORWARDED TO THE  
CITY COUNCIL



Office of the City Administrator

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**City of Oakland  
Energy Savings Calculations for EECBG Projects**

- Supplemental  
Attachment A

Description	Project Implementation Cost for Analysis	Cost Savings per Year	Cost Savings per Implementation Dollar per Year	Simple Payback (Years)	Energy Savings (%)	Energy Cost Savings (\$/yr)	Operational or Other Savings (\$/yr)	Notes
<b>Recommended Projects:</b>								
Adaptive traffic signal system to improve traffic flow (CEDA - TSD)	\$1,000,000	\$925,000	\$0.926	1.1	28%	\$ 862,774	\$ 62,226	Energy cost savings estimate based on analysis in Synchro software. Operational savings estimate based on reduced collision repairs.
Energy efficiency upgrades to HVAC Systems at Police Administration Building (PWA)	\$770,000	\$100,000	\$0.092	7.7	16%	\$ 85,000	\$ 15,000	Energy savings estimated relative to total energy cost for the PAB site from analysis by staff and engineers from PG&E programs. Operational cost savings estimated relative to historic maintenance costs for aging equipment.
Lighting retrofits for City buildings (PWA)	\$500,000	\$124,000	\$0.249	4.0	20%	\$ 124,000	\$ -	Energy savings is typical for lighting energy efficiency improvement projects relative to lighting energy used on a space-by-space basis.
Energy efficiency upgrades to Civic Center City buildings (PWA)	\$580,000	\$77,000	\$0.133	7.5	5%	\$ 77,000	\$ -	Energy savings is estimated as a percentage of total electricity and natural gas use at City Hall, Dalziel and Wilson buildings.
City Data Center virtualization (DIT)	\$500,000	\$114,000	\$0.25	4.4	47%	\$ 47,000	\$ 67,000	Energy savings is estimated by calculating reduced energy use for servers that will be virtualized and for historic results from savings to HVAC systems.
EECBG technical assistance (PWA)	\$80,000	-	N/A	-	-	-	-	
Electrical and energy efficiency upgrades to lighting systems at the Police Administration Building (PWA)	\$130,000	\$12,000	\$0.091	10.8	20%	\$ 9,000	\$ 3,000	Energy cost savings is estimated based on typical results for lighting system control improvements. Maintenance cost savings is based on replacing two obsolete circuit breakers a year.
Community ballfield lighting controls (PWA)	\$119,200	\$6,000	\$0.062	19.9	-	\$ 6,000	\$ -	Energy cost savings estimate based on 20,000 fewer vehicle miles to shut off lights and 600 fewer hours of lighting operation for 17 ballfields.
Community bike lane improvements (PWA)	\$200,000	-	Insufficient info to quantify	-	-	-	-	
Green building code training for City Staff (CEDA)	\$40,000	-	N/A	-	-	-	-	
<b>Subtotal for Recommended Projects:</b>	<b>\$3,919,200</b>	<b>\$1,358,000</b>				<b>\$1,210,774</b>	<b>\$147,226</b>	

**City of Oakland  
Energy Savings Calculations for EECBG Projects**

**Supplemental  
Attachment A**

Description	Cost Estimate	Cost Savings per Year	Cost Savings per Implementation Dollar per Year	Simple Payback (Years)	Energy Savings (%)	Energy Cost Savings (\$/yr)	Operational or Other Savings (\$/yr)	Notes
<b>Contingency Projects</b>								
Smart water controllers for City fields and landscaping (PWA)	\$300,000	\$79,000	\$0.2633	3.8		\$ 1,000	\$ 78,000	<b>Strong contingency project.</b> Small energy cost savings based on reduced vehicle travel. Operational cost savings estimate based on improved staff utilization from current effort to troubleshoot leaks at 17 ballfields. Co-benefit for reduced water use.
<b>Other Considered Projects:</b>								
Improve energy efficiency of City pools (PWA)	\$239,000	\$31,000	\$0.130	7.7	14%	\$ 10,000	\$ 21,000	<b>Not eligible for EECBG Funds.</b> Energy Cost savings based on reduced natural gas use for more efficient heaters. Maintenance cost savings based on avoided replacements for failing boilers.
Solar hot water systems for fire stations (PWA)	\$422,000	\$12,000	\$0.028	35.2	70%	\$ 12,000	\$ -	<b>Insufficient benefits.</b> Energy savings is typical for natural gas energy savings on hot water heating systems.
Green retrofit specifications and training in support of sustainable energy financing program (StopWaste.Org 4% proposal) (CEDA)	\$136,000	-	N/A	-	-	-	-	<b>Oakland will use funds from an existing source to participate in this program.</b>
Additional outreach and training to support sustainable energy financing program (ABAG 10% proposal adds 6% to StopWaste.Org item)	\$234,000	-	N/A	-	-	-	-	<b>Not shovel ready.</b>
Energy efficiency and electric vehicles at recreation centers (OPR)	None Recommended	-	Not calculated	-	-	-	-	<b>Partially covered by existing programs and partially not shovel ready.</b>
Window rehabilitation at Historic Melrose Library (Library)	\$400,000	-	Negligible	-	Negligible	-	-	<b>Insufficient benefits.</b> This project includes repairs to existing windows and adding window film which has almost energy saving benefit for the heating system. Annual heating energy costs range from \$3,000 to \$4,400 per year.

**City of Oakland  
Energy Project Status by Facility**

**Attachment B**

Facility Name	Project Category	Status According to Energy Group	Completion Year
Allendale Rec Center	Lighting Retrofit	Complete	2004
Animal Shelter	Plan Review	Complete	1999
Arroyo Viejo Fieldhouse	Lighting Retrofit	Complete	1995
Arroyo Viejo Headstart	Lighting Retrofit	Complete	1995
Arroyo Viejo Recreation Center	Lighting Retrofit	Complete	1995
Asian Branch Library	Plan Review	Complete	1994
Ballfields at Lowell, Franklin & Mosswood	PG&E Rebate	Complete	1994
Bella Vista Field House	Future Project	In Queue for planning	
Bowling Green Bldg	Future Project	In Queue for planning	
Brookdale Discovery Center	Lighting Retrofit	Complete	2003
Brookdale Recreation Center	Lighting Retrofit	Complete	2003
Brookfield Branch Library	Plan Review	Complete	1992
Brookfield Headstart	Lighting Retrofit	Complete	2003
Brookfield Senior Center	Plan Review	Complete	1992
Burkhalter Park	Future Project	In Queue for planning	
Bushrod Recreation Center	Plan Review	Complete	2005
Cesar Chavez Branch Library	Plan Review	Complete	2006
Chabot Golf Course	Current Project	>90% Complete	1993
Chabot Golf Course Cart Barn	Plan Review	Complete	2008
Chabot Golf Course Clubhouse	Plan Review	Complete	1993
Charles Green Library	Plan Review	Complete	2001
Children's Fairyland	Current Project	Project underway	
Chinese Garden Phase III Plan Review	Plan Review	Complete	1993
City Administration Building	Plan Review	Complete	1998
City Hall Energy Renovations	Plan Review	Complete	1995
City of Oakland Solar at MSC and Ice Center	Solar Power	Complete	2005
City Stable	Future Project	In Queue for planning	
Clay Street Garage	Lighting Retrofit	Complete	2003
Columbia Gardens Building	Future Project	In Queue for planning	
Concordia Center	Lighting Retrofit	Complete	2003
Dalziel Building Parking	Current Project	In Design	
Davies Tennis Stadium Clubhouse	Lighting Retrofit	Complete	2003
De Fremery Pool Lighting	Lighting Retrofit	Complete	2008
De Fremery Pool Pumping	Current Project	Project underway	
De Fremery Rec Ctr	Lighting Retrofit	Complete	2003
Dimond Library	Lighting Retrofit	Complete	2004
Dimond Rec Center	Current Ltg Project	~75% Complete	
Dunsmuir House	Lighting Retrofit	Complete	2004
East Oakland Multi Use Center	Lighting Retrofit	Complete	2003
East Oakland Senior Center	Plan Review	Complete	1992
East Oakland Sports Center	Plan Review	Active	
Eastmont Branch Library	Plan Review	Complete	≈2000
Eastmont Headstart	Plan Review	Complete	1996
Elmhurst Library	Lighting Retrofit	Complete	2003
Ettie Street Pump Room	Future Project	In Queue for planning	
Fire Alarm Bldg	Lighting Retrofit	Complete	≈2004
Fire Station #1	Lighting Retrofit	Complete	1999
Fire Station #3	Plan Review	Complete	1994
Fire Station #4	Lighting Retrofit	Complete	2004
Fire Station #5	Lighting Retrofit	Complete	2003
Fire Station #6	Lighting Retrofit	Complete	2004
Fire Station #7	Plan Review	Complete	1999
Fire Station #8	Plan Review	Complete	2002
Fire Station #10	Lighting Retrofit	Complete	2004
Fire Station #12	Lighting Retrofit	Complete	2004
Fire Station #13	Lighting Retrofit	Complete	2004

**City of Oakland  
Energy Project Status by Facility**

**Attachment B**

Facility Name	Project Category	Status According to Energy Group	Completion Year
Fire Station #14	Future Project	In Queue for planning	
Fire Station #15	Lighting Retrofit	Complete	2004
Fire Station #16	Lighting Retrofit	Complete	2003
Fire Station #17	Lighting Retrofit	Complete	2004
Fire Station #18	Plan Review	Active	
Fire Station #19	Lighting Retrofit	Complete	2003
Fire Station #20	Plan Review	Complete	1994
Fire Station #21	Lighting Retrofit	Complete	≈2004
Fire Station #23	Lighting Retrofit	Complete	2004
Fire Station #24	Plan Review	Complete	1997
Fire Station #25	Lighting Retrofit	Complete	2004
Fire Station #26	Plan Review	Complete	1997
Fire Station #27	Lighting Retrofit	Complete	2004
Fire Station #28	Lighting Retrofit	Complete	2004
Fire Station #29	Lighting Retrofit	Complete	≈2004
FM Smith Rec Center	Lighting Retrofit	Complete	2003
Frank Marr Garage Harrison St.	Lighting Retrofit	Complete	2004
Franklin Recreation Center	Lighting Retrofit	Complete	2004
Franklin St. Garage	Lighting Retrofit	Complete	2004
Fremont Pool Lighting	Lighting Retrofit	Complete	2008
Fremont Pool Pumping	Current Project	Project underway	
Galbraith Golf Clubhouse	Future Project	In Queue for planning	
Garden Center Lighting	Lighting Retrofit	Complete	1991
Golden Gate Branch Library	Lighting Retrofit	Complete	2004
Golden Gate Community Center	Lighting Retrofit	Complete	2004
Golden Gate Library	Plan Review	Complete	1999
Greenman Field	PG&E Rebate	Complete	≈1992
Hall of Justice Courts and Jail	Lighting Retrofit	Complete	1999
Hall of Justice Police Administration Building Lighting	Lighting Retrofit	> 70% complete	2007
Heavy Equipment Shop 5050 Coliseum Way	Plan Review	Complete	1996
Henry J. Kaiser Lighting	Lighting Retrofit	Complete	2005
Ira Jinkins Recreation Center	Lighting Retrofit	Complete	2004
Ira Jinkins Recreation Center Design Changes	Plan Review	Complete	≈1992
Jefferson Square Fluorescent Lighting Retrofits	Lighting Retrofit	Complete	1990
Joaquin Miller Community Center	Plan Review	Complete	1997
Joaquin Miller Park - Sinawik Cabin	Future Project	In Queue for planning	
Joaquin Miller Ranger Station	Lighting Retrofit	Complete	≈2004
Jones Field	PG&E Rebate	Complete	1990
Junior Arts Center	Plan Review	Complete	1997
Knowland Park Entrance Plan Review	Plan Review	Complete	1993
Lake Merrit Sailboat House Phase II	Plan Review	Complete	1994
Lake Merritt Boathouse Lighting Phase 3	Lighting Retrofit	Complete	2004
Lakeside Park	Lighting Retrofit	Complete	2004
Lakeview Branch Library	Lighting Retrofit	Complete	2003
LED Traffic Signals Red 1999	Traffic Retrofit	Complete	1999
LED Retrofits 2001 Green	Traffic Retrofit	Complete	2001
Leona Lodge	Lighting Retrofit	Complete	2004
Lincoln Community Center	Lighting Retrofit	Complete	2004
Lincoln Community Center	Plan Review	Complete	1997
Lincoln Recreation Center	Lighting Retrofit	Complete	2004
Lincoln Recreation Center Gym	Lighting Retrofit	Complete	2004
Lionel J. Wilson Building Data Center	HVAC Retrofit	Complete	≈2005
Live Oak Pool Cover	Energy Retrofit	Complete	1991
Live Oak Pool Lighting	Plan Review	Complete	2008
Live Oak Pool Pumping	Current Project	Project underway	
Lyons Pool Lighting	Lighting Retrofit	Complete	2008

**City of Oakland  
Energy Project Status by Facility**

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Facility Name	Project Category	Status According to Energy Group	Completion Year
Lyons Pool Pumping	Current Project	Project underway	
Main Library	Lighting Retrofit	Complete	1995
Main Library Photocell on Entry	Lighting Retrofit	Complete	1991
Main Library Stacks	Current Project	Project underway	1994
Malonga Arts Center	Plan Review	Complete	≈1993
Manzanita Rec. Ctr.	Lighting Retrofit	Complete	2003
Maxwell House	Lighting Retrofit	Complete	2004
McConnell Field	PG&E Rebate	Complete	1991
Melrose Branch Library	Lighting Retrofit	Complete	≈2006
MLK Branch Library	Lighting Retrofit	Complete	1995
Montclair Branch Library	Lighting Retrofit	Complete	2004
Montclair Garage Stairwells	Future Project	In Queue for planning	
Montclair Golf Clubhouse	Future Project	In Queue for planning	
Montclair Recreation Center	Lighting Retrofit	Complete	2004
Morcom Rose Garden	Plan Review	Complete	1993
Mosswood Recreation Center	Lighting Retrofit	Complete	2003
Municipal Service Center - Bldg 4 Lighting	Lighting Retrofit	Complete	2008
Municipal Service Center - Bldg 5 Work Bay Lighting	Current Project	In planning stages	
Municipal Service Center - Building 2 HVAC Retrofit	Plan Review	Complete	1999
Municipal Service Center - Building 2 Occ Sensors	Lighting Retrofit	Complete	1992
Municipal Service Center - Building 4 HVAC Retrofit	HVAC Retrofit	Complete	1994
Municipal Service Center Building No. 2 Addition	Plan Review	Complete	1992
Municipal Service Center Lighting Retrofits	Lighting Retrofit	Complete	1999
Museum 1st Floor Corridor Compact Fluorescents	Lighting Retrofit	Complete	1991
Museum Chiller Plant	HVAC Retrofit	Complete	2001
Museum Compact Fluorescent Lamps	Lighting Retrofit	Complete	1991
Museum Corridor Compact Fluorescents	Lighting Retrofit	Complete	1991
Museum Expansion	Plan Review	Active	
Museum Garage	Lighting Retrofit	Complete	≈2000
Museum HVAC	HVAC Retrofit	Complete	1999
Museum Kitchen	Energy Retrofit	Complete	2001
Museum Lecture Hall Air Conditioning	HVAC Retrofit	Complete	≈2003
Museum Lighting	Lighting Retrofit	Complete	1999
Museum Restroom Compact Fluorescents	Lighting Retrofit	Complete	1990
Necklace of Lights	Lighting Retrofit	Complete	2007
North Oakland Senior Center & MLK Plaza Core	Plan Review	Complete	1998
North Oakland Sports	Plan Review	In Queue for planning	
Oakland Zoo Office	Plan Review	Complete	1993
OFD Training Tower	Lighting Retrofit	Complete	2008
OPD Eastmont sub-station	Plan Review	Complete	2005
Peralta House	Lighting Retrofit	Complete	≈2008
Piedmont Branch Library	Lighting Retrofit	Complete	2004
Poplar Recreation Center	Future Project	In Queue for planning	
Rainbow Recreation Center	Lighting Retrofit	Completed with PayGo Funds	≈2005
Redwood Heights Recreation Center	Plan Review	Complete	1996
Redwood Heights Recreation Center Annex	Lighting Retrofit	Complete	2003
Rockridge Library	Plan Review	Complete	1996
Rose Garden	Lighting Retrofit	Complete	1994
Rotary Natural Science Center	Lighting Retrofit	Complete	2004
Sailboat House Renovation	Plan Review	Complete	2009
San Antonio Headstart	Plan Review	Complete	1995
San Antonio Park Headstart	Lighting Retrofit	Complete	2004
San Antonio Park Recreation Center	Lighting Retrofit	Complete	2004
Sanborn Recreation Center	Plan Review	Complete	≈2005
Sequoia Lodge	Lighting Retrofit	Complete	1995
Sheffield Village Center	Lighting Retrofit	Complete	2003



**City of Oakland  
Energy Project Status by Facility**

**Attachment B**

<b>Facility Name</b>	<b>Project Category</b>	<b>Status According to Energy Group</b>	<b>Completion Year</b>
Snow Park	Future Project	In Queue for planning	
Studio One Lighting Retrofit	Lighting Retrofit	Complete	1995
Studio One Renovation	Plan Review	Complete	2008
Tassafaronga Community Center	Lighting Retrofit	Complete	2004
Tassafaronga Gymnasium	Plan Review	Complete	2004
Telegraph Garage		Inactive/Not Planned	
Temescal Library Lighting Retrofit	Lighting Retrofit	Complete	1995
Temescal Pool Lighting	Lighting Retrofit	Complete	2008
Temescal Pool Pumping	Current Project	Project underway	
Verdese Carter Recreation Center	Lighting Retrofit	Complete	2004
Veteran's Building HVAC	Plan Review	Complete	1996
Veteran's Building Lighting	Lighting Retrofit	Complete	1999
Veterans Hall Lounge Area	Current Project	In planning stage	
West Oakland Multi-Purpose Center Phase 3	Lighting Retrofit	Complete	1999
West Oakland Senior Center	Plan Review	Complete	1997
Willow Park	Future Project	In Queue for planning	
Woodminster Theater	Lighting Retrofit	Complete	2004