



Office of the City Manager

CONSENT CALENDAR  
September 18, 2007

To: Honorable Mayor and  
Members of the City Council

From: *PK* Phil Kamlarz, City Manager

Submitted by: Renelda Mary, Interim Director, Housing Department

Subject: Agreements: Solar America Program

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute a cooperative agreement and any amendments with the U.S. Department of Energy for the period September 15, 2007 through September 14, 2009 in the amount of \$200,000 in revenues for solar power market development.

SUMMARY

This item authorizes the City to accept a grant from the US Department of Energy (DOE). The purpose of the project is to accelerate the development of local solar power installations in order to reduce community green house gas emissions. The project should also help to grow local solar installation firms.

This project is proposed in response to the November 2007 ballot Measure G, Greenhouse Gas Reductions, which charged the City of Berkeley with the task of developing a plan to reduce greenhouse gas emissions by 80% by 2050. Increased use of renewable energy, including local solar electric and thermal power systems, will be an essential part of the reduction plan.

Under the DOE agreement, the first phase of the project will consist of program design. This phase will engage stakeholders to help design a program that will make solar installations simpler and less expensive by aggregating projects, contracting and financing. The second phase of the project will pilot the program by installing 142 kW of photovoltaic (PV) installations and 10 solar hot water (SHW) systems at 10 residential and 5 commercial/public sites.

Prior to committing to any contracts for program design and administration services, the City will assess other opportunities to promote solar within the community, including the use of public financing secured by property taxes. Based on this assessment, the City may request a change in the scope of work from DOE. Another Council report will be delivered if DOE accepts the amendment.

The two-year grant requires a match, consisting of \$80,000 in new expenses from the City, \$108,000 in existing in-kind services from the City and \$182,000 in in-kind services from other partners. The City's match funds are in the budget.

**FISCAL IMPACTS OF RECOMMENDATION**

The US Department of Energy has awarded the City \$200,000 for a two-year period. The DOE solicitation required a 50% cost share; the City and its partners won the award in part because we are providing a 65% cost share. The \$370,000 match includes an \$80,000 cash match from the City and \$108,000 in-kind match from the City. Other match sources include the PG&E East Bay Energy Watch (EBEW), the University of California Renewable and Appropriate Energy Laboratory (RAEL) and the City of Oakland. These matches have been pledged in writing and the City will execute agreements with its partners to secure the matches.

	Cash Resources			In Kind Resources					Total
	City of Berkeley	US DOE	Subtotal	City of Berkeley	UCB Rael	PG&E EBEW	City of Oakland	Subtotal	
<b>Revenues</b>	80,000	200,000	280,000	108,148	70,000	100,000	12,000	290,148	570,148
<b>Expenses</b>									
Phase I Administrator	28,870	71,452	100,322					-	100,322
Phase II Administrator	39,651	98,137	137,788					-	137,788
Build It Green	11,479	28,411	39,890					-	39,890
Travel		2,000	2,000					-	2,000
Personnel				87,298	70,000		12,000	169,298	169,298
Capital Indirect Charges						100,000		100,000	100,000
				20,850	-	-	-	20,850	20,850
<b>Total</b>	80,000	200,000	280,000	108,148	70,000	100,000	12,000	290,148	570,148

The \$80,000 City cash match is available in the Energy and Sustainable Development division budget. The sources of these funds include \$49,000 in carryover of 2007 General Funds from the Energy and Sustainable Development division (\$12,000 from 010-8204 and \$37,000 from 010-8202) and \$39,000 from the cash balance in the 355 (PG&E) fund.

The City's in-kind match consists of existing staff time and indirect services, as determined by the Finance Department.

The \$280,000 in new City expenses will be used for professional services contracts and travel to project meetings.

The table above describes the budget and matches.

The Department proposes a \$39,890 contract with Build It Green (BIG), a local non-profit agency, to provide program planning services and another contract in the amount of \$238,110 for a program administrator to be determined by competitive solicitation. Authorization for these contracts will be sought at a later date.

### CURRENT SITUATION AND ITS EFFECTS

In November 2007, voters charged the City of Berkeley with the task of developing a plan to reduce greenhouse gas emissions by 80% by 2050. This will require significant reductions in the use of fossil fuel energy for buildings, which causes about 53% of the community's emissions (the balance are from transportation sources). Increased use of renewable energy, including local solar electric and thermal power systems, will be an essential part of the reduction plan.

Many of the opportunities for local solar power are small-scale applications. The costs of these projects are relatively high due to the complexity of the transactions. Residents and business that wish to install solar power systems must navigate the processes of evaluating costs and benefits, selecting a designer/contractor and a system, integrating energy efficiency measures, applying for permits, rebates, tax credits and financing, monitoring performance and arranging for warranty service, if necessary.

This situation has limited the market for new solar energy systems.

### BACKGROUND

The City was awarded a U.S. Department of Energy Solar City Strategic Partnership cooperative agreement on June 19, 2007. The award was made in response to a February 2007 staff proposal. City Council approval is needed to execute the cooperative agreement with DOE.

The project will develop and pilot the ***East Bay Smart Solar Program (Smart Solar)***, a turn-key program to install solar PV and solar SHW systems in the residential and small-to-medium commercial/public sectors. This turn-key program approach is based upon an existing successful energy efficiency program (the East Bay Smart Lights Program) that represents owners in specifying, purchasing and managing energy efficiency projects. This project will adapt this turn-key approach to transform the market for solar technologies first in Berkeley and then throughout the East Bay, and in the process increase the role of solar power as an economic development mechanism within the City.

The goals and objectives of the program are to:

- Increase the market share of solar energy technologies in the residential and small-to-medium commercial/public sectors in the East Bay
- Pilot the program during the grant period to install 142 kW of PV installations, and 10 solar SHW systems producing at least 30 therms per month at 10 residential and 5 commercial/public sites.
- Launch a full-scale program in partnership with the local utility (Pacific Gas and Electric) under an existing local government partnership, the PG&E East Bay Energy Watch, thereby expanding the scope and depth of utility services provided in the region. The full-scale program goals are annually to install 800 kW of PV (approximately 75 residential systems and 26 commercial systems) and 24,000 therms of thermal projects (80 projects), or 4.8 mW and 144,000 annual therms by 2015.

In addition to the City match in-kind matching funds will available through the EBEW. Smart Solar clients will receive incentives and technical services to support implementation of the program. The EBEW is a partnership of private and non-profit agencies sponsored by PG&E that is providing energy services throughout the East Bay. The program provides approximately \$5 million in services annually.

Other sources of in-kind matching funds include UCB/RAEL and the City of Oakland. UCB/RAEL has committed two doctoral students to provide technical research for the project. The City of Oakland is providing input and review for the program design.

#### RATIONALE FOR RECOMMENDATION

This program will enable more local energy consumers to use renewable energy to power their homes and businesses. If successful it will also generate business for private solar power companies and increase the number of local jobs.

The pilot program is expected to reduce carbon dioxide emissions from gas water heaters and from electrical generating plants by 76 tons annually. The full scale program is expected to reduce over 2,500 tons annually.

This program will help the City fulfill its greenhouse gas reduction goals as established by 2007 Measure G.

#### ALTERNATIVE ACTIONS CONSIDERED

None.

#### CONTACT PERSON

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Attachments:  
1: Resolution

RESOLUTION NO. ##,###-N.S.

CONTRACTS: SOLAR AMERICA FOR IMPLEMENTATION OF THE EAST BAY SMART SOLAR PROGRAM WITH THE U.S. DEPARTMENT OF ENERGY, THE COMMUNITY ENERGY SERVICES CORPORATION AND BUILD IT GREEN

WHEREAS, Measure G on the November 2007 ballot requests the City to prepare a plan to reduce community-wide greenhouse gas emissions; and

WHEREAS, local thermal and photovoltaic solar power systems, integrated with energy efficiency, have the potential to reduce greenhouse gas emissions; and

WHEREAS, the City submitted a proposal for Federal funding to promote solar power based on the successful Smart Lights lighting program model, and

WHEREAS, the U.S. Department of Energy has awarded the City a \$200,000 cooperative agreement to for the program; and

WHEREAS, funds will be available in the FY 08 General Fund for match purposes.

WHEREAS, this agreement has been entered into the City's contract database, CMS number UZ2HA.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute a cooperative agreement and any amendments with the U.S. Department of Energy for the period September 15, 2007 through September 14, 2009 in the amount of \$200,000 in revenues for solar power market development.



