

File No. 101010

Committee Item No. 1

Board Item No. 06

## COMMITTEE/BOARD OF SUPERVISORS

### AGENDA PACKET CONTENTS LIST

Committee: Land Use and Economic Development Date August 2, 2010

Board of Supervisors Meeting

Date 08/10/10

#### Cmte Board

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Motion                                       |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Resolution                                   |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Ordinance                                    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Legislative Digest                           |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Budget Analyst Report                        |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Legislative Analyst Report                   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Youth Commission Report                      |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Introduction Form (for hearings)             |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Department/Agency Cover Letter and/or Report |
| <input type="checkbox"/>            | <input type="checkbox"/>            | MOU  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Grant Information Form                       |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Grant Budget                                 |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Subcontract Budget                           |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Contract/Agreement                           |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Form 126 – Ethics Commission                 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Award Letter                                 |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Application                                  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Public Correspondence                        |

#### OTHER

(Use back side if additional space is needed)

- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>Assistance Agreement</u>                     |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>Legislative Checklist</u>                    |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>Budget Analyst Reference Guide Questions</u> |
| <input type="checkbox"/>            | <input type="checkbox"/>            | _____   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | _____   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | _____   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | _____   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | _____   |

Completed by: LaTonia Stokes

Date July 30, 2010

Completed by: Alicia Somera

Date August 3, 2010

An asterisked item represents the cover sheet to a document that exceeds 25 pages.  
The complete document can be found in the file.



1 [Accept and Expend Grant - American Recovery and Re-Investment Act - and Amendment to the  
Annual Salary Ordinance, FY2010-2011 - \$1,670,000.00]

2  
3 **Ordinance to retroactively accept and expect a grant in the amount of \$1,670,000.00**  
4 **from the U.S. Department of Energy through the County of Los Angeles and the**  
5 **Association of Bay Area Governments, and amending the Annual Salary Ordinance**  
6 **FY2010-2011 to reflect the addition of three positions in the Department of the**  
7 **Environment.**

8  
9 Note: Additions are single-underline italics Times New Roman;  
10 deletions are ~~striketrough italics Times New Roman~~.  
11 Board amendment additions are double underlined.  
Board amendment deletions are ~~striketrough-normal~~.

12 Be it ordained by the People of the City and County of San Francisco:

13  
14 **Section 1. Findings.**

15 Whereas the U.S. Department of Energy provides funds to eligible local governments  
16 for cost-effective energy efficiency projects based on a competitive selection process.

17 Whereas the City and County of San Francisco is eligible for funding under the U.S.  
18 Department of Energy Program.

19 Whereas the U.S. Department of Energy allows public agencies or non-profit entities to  
20 apply for funds on behalf of eligible local governments.

21 The San Francisco Department of the Environment collaborated with the Association of  
22 Bay Area Governments (ABAG), Sacramento County, San Diego County, and  
23  
24  
25

1 the County of Los Angeles to submit a statewide application to U.S. Department of Energy to  
2 implement "Retrofit California," which includes energy efficiency projects in the City and  
3 County of San Francisco.

4 Based on the evaluation of applications, the U.S. Department of Energy selected the  
5 County of Los Angeles to receive funding of \$30,000,000.00 for the Retrofit California  
6 Program, of which ABAG will receive \$8,395,887.00 and act as administrator for the  
7 participating Bay Area local governments.

8 The City and County of San Francisco will receive \$1,670,000.00, including \$346,500  
9 indirect costs, from ABAG to implement energy efficiency projects as part of Retrofit California  
10 and in coordination with other regional Bay Area programs.

11 The City and County of San Francisco is providing \$225,000 in matching funds, and is  
12 committed to ongoing, coordinated efforts to reduce the emissions that cause global warming,  
13 improve air quality, reduce waste, reduce energy use, save money, and create jobs.

14  
15 **Section 2. Authorization to Retroactively Accept and Expend Funds.**

16 The Board of Supervisors hereby authorizes the Department of the Environment to  
17 accept and expend a Federal grant in the amount of \$1,670,000.00, and to furnish whatever  
18 additional information or assurances the funding agency may request in connection with this  
19 grant, and to execute any and all agreements necessary to carry out the purpose of the grant  
20 and to expend funds in execution of this project.

Section 3. Grant-funded Positions; Amendment to FY 2010-2011 Annual Salary

Ordinance.

The hereinafter designated section and item of the Annual Salary Ordinance, FY 2010-2011, is hereby amended so that the same shall read as follows:

Department: ENV (22) Environment

Index Code: 220182

Program: CIP

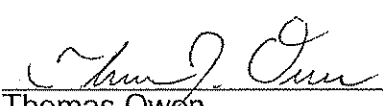
Subfund: 2S ENV ARA

Amendment:	Number of Positions:	Class and Item No.:	Compensation Schedule:
Add	.87 FTE	5642 Senior Environmental Specialist: Energy	\$ 2,902 \$ 3,527
Add	.87 FTE	5640 Environmental Specialist: Energy	\$ 2,496 \$ 3,035
Add	.87 FTE	5638 Environmental Assistant: Energy	\$ 2,053 \$ 2,496

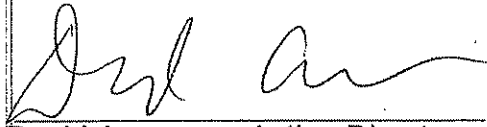
APPROVED AS TO CLASSIFICATION:  
DEPARTMENT OF HUMAN RESOURCES

APPROVED AS TO FORM  
DENNIS J. HERRERA, City Attorney

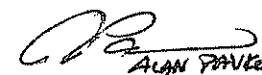
By:   
Micki Callahan  
Director

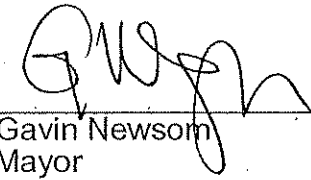
By:   
Thomas Owen  
Deputy City Attorney

1 RECOMMENDED:

2 

3  
4 David Assmann, Acting Director  
Department of the Environment

  
ALAN PANKOVICH  
for Ben Rosenfeld  
Controller

6  
7 Approved:   
8 for Gavin Newsom  
Mayor

9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

**TO:** Angela Calvillo, Clerk of the Board of Supervisors  
**FROM:** The Department of the Environment  
**DATE:** July 12, 2010  
**SUBJECT:** Accept and Expend with ASO amendment, ARRA Grant  
**GRANT TITLE:** Retrofit Bay Area-San Francisco

---

Attached please find the original and 4 copies of each of the following:

X Proposed grant Ordinance; original signed by Department, Mayor, Controller, City Attorney and DHR.

X Grant information form, including disability checklist

X Grant budget

X Grant application

X Grant award letter from funding agency

X Other (Explain): Legislative Checklist

**Special Timeline Requirements:**

**In order to start coordinating with other Bay Area counties that are participating in the program, the Department requests waiver of the thirty day rule.**

**Departmental representative to receive a copy of the adopted ordinance:**

Name: Shawn Rosenmoss

Phone:415-355-3746

Interoffice Mail Address:

Certified copy required: Yes

No X

(Note: certified copies have the seal of the City/County affixed and are occasionally required by funding agencies. In most cases ordinary copies without the seal are sufficient).

File Number: 101010

(Provided by Clerk of Board of Supervisors)

**Grant Information Form**

(Effective January 2000)

Purpose: ASO Amendment with authorization for SF Environment to Expend grant funds

The following describes the grant referred to in the accompanying ordinance:

1. Grant Title: Retrofit California -San Francisco

2. Department: Department of the Environment (SF Environment)

3. Contact Person: Shawn Rosenmoss Telephone: 415-355-3746

4. Grant Approval Status (check one):

Approved by funding agency

Not yet approved

5. Amount of Grant Funding Approved or Applied for: \$ 1,670,000.00

6a. Matching Funds Required: Yes \$ 225,000

b. Source(s) of matching funds (if applicable): Matching funds are primarily being provided through the salaries of existing City staff, funded by Energy Watch and foundation funding, who will contribute to the project by performing task that are currently part of their regular duties.

7a. Grant Source Agency: U.S. Department of Energy Retrofit Ramp-Up Program, which will be awarded to the County of Los Angeles, sub-awarded to the Association of Bay Area Governments (ABAG) and sub-awarded to SF Environment

b. Grant Pass-Through Agency (if applicable): Association of Bay Area Governments

8. Proposed Grant Project Summary:

The County of Los Angeles is the state-wide lead and the Association of Bay Area Governments is the regional lead in an effort to obtain funds from the U.S. Department of Energy, which are available to eligible local governments for cost-effective energy efficiency projects. The four-region energy efficiency program will retrofit 18,000 homes (single family and multifamily) to achieve reduction in home energy consumption, while creating 2,600 home energy retrofit jobs. Based on negotiations with USDOE and the innovative strategies proposed by SF Environment, the proposed budget allocation for the City and County of San Francisco is \$1,670,000.00.

9. Grant Project Schedule, as allowed in approval documents, or as proposed:

Start-Date: June 3, 2010

End-Date: June 2, 2013

10. Number of new positions created and funded:

There will be new positions created for this project. In order to meet the time constraints for obtaining legislative approval to begin work with the other counties, the Department of the Environment is now submitting a new ordinance to create three positions: Class 5642 Senior Environmental Specialist Energy, Class 5640 Environmental Specialist, and Class 5638 Environmental Assistant.

New positions that are created and funded through this grant will end when the grant funding ends.



New positions that are created and funded through this grant will end when the grant funding ends.

12a. Amount budgeted for contractual services: ~~\$522,442~~ 546,322

b. Will contractual services be put out to bid?

Yes, Contracts to consultants have been awarded based on the standard City contracting process of issuing an RFP and selecting contractors based on responses.

c. If so, will contract services help to further the goals of the department's MBE/WBE requirements? Yes

d. Is this likely to be a one-time or ongoing request for contracting out? One-time

13a. Does the budget include indirect costs?  Yes  No

b1. If yes, how much? \$346,500

b2. How was the amount calculated? Staff years times the Departmental overhead rate per year.

c. If no, why are indirect costs not included?

Not allowed by granting agency

To maximize use of grant funds on direct services

Other (please explain):

14. Any other significant grant requirements or comments:

**\*\*Disability Access Checklist\*\***

15. This Grant is intended for activities at (check all that apply):

Existing Site(s)

Existing Structure(s)

Existing Program(s) or Service(s)

Rehabilitated Site(s)

Rehabilitated Structure(s)

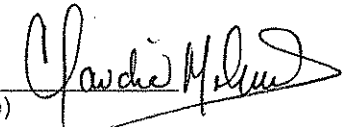
New Program(s) or Service(s)

New Site(s)

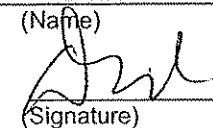
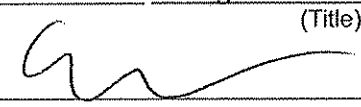
New Structure(s)

16. The Departmental ADA Coordinator and/or the Mayor's Office on Disability have reviewed the proposal and concluded that the project as proposed will be in compliance with the Americans with Disabilities Act and all other Federal, State and local access laws and regulations and will allow the full inclusion of persons with disabilities, or will require unreasonable hardship exceptions, as described in the comments section:

Comments:

Departmental or Mayor's Office of Disability Reviewer: Claudia Molina   
(Name)

Date Reviewed: 7/08/2010

Department Approval: David Assmann Acting Director  
(Name) (Title)  
   
(Signature)

**San Francisco Department of the Environment  
US Dept of Energy - Retrofit Ramp-Up (Retrofit California)**

	Description	Other notes	USDOE	Year 1	Year 2	Year 3	Match	Total Project
<b>PERSONNEL</b>								
Environmental Specialist 5642 Program Manager	83%	Grant funded for 2.5 years. Program management and reporting, project planning, coordinate with other counties, ensure integration with other efficiency and climate programs	\$ 229,255	\$ 91,702	\$ 91,702	\$ 45,851		\$ 229,255
Environmental Specialist 5640	83%	Grant funded for 2.5 years. Implement projects, data tracking and reporting.	\$ 197,275	\$ 78,910	\$ 78,910	\$ 39,455		\$ 197,275
Environmental Assistant 5638	67%	Grant funded for 2 years. Assist with project implementation, data tracking, and reporting	\$ 129,792	\$ 64,896	\$ 64,896	\$ -		\$ 129,792
Subtotal Personnel			\$ 556,322	\$ 235,508	\$ 235,508	\$ 85,306	\$ -	\$ 556,322
Fringe	33%		\$ 183,586	\$ 77,718	\$ 77,718	\$ 28,151	\$ -	\$ 183,586
<b>Total personnel</b>			\$ 739,908	\$ 313,226	\$ 313,226	\$ 113,457	\$ -	\$ 739,908
<b>OTHER DIRECT</b>								
Contractual Services		Assist Department marketing activities, development and production of marketing materials, analysis and reporting on marketing channel effectiveness, other tasks as assigned.	\$ 546,322	\$ 273,161	\$ 197,161	\$ 76,000	\$ -	\$ 546,322
Energy Watch (\$125,000), Frank Foundation (\$80,000), Living Cities (\$20,000)		Audits and incentives for multi-family buildings, research on improved audits for San Francisco residential building stock, webtool development, training for local contractors on San Francisco housing stock.	\$ -				\$ 225,000	\$ 225,000
Materials and Supplies		Energy saving devices for give-away at fairs and as door-openers/leave-behind.	\$ 29,000	\$ 14,000	\$ 14,000	\$ 2,000	\$ -	\$ 29,000
Local Field Expenses		Attend regional coordination meetings among ABAG counties	\$ 1,000	\$ 450	\$ 350	\$ 200	\$ -	\$ 1,000
Travel		Attend required meeting in Los Angeles; report at the conference of the American Council for an Energy Efficient Economy (Asilomar- Pacific Grove, CA); report at Affordable Comfort (2011 San Francisco, 2012 TBD) both sponsored by USDOE.	\$ 7,270	\$ 2,620	\$ 2,030	\$ 2,620	\$ -	\$ 7,270
Subtotal Other Direct			\$ 583,592	\$ 290,231	\$ 213,541	\$ 80,820	\$ 225,000	\$ 808,592
<b>TOTAL DIRECT COSTS</b>			\$ 1,323,500	\$ 603,457	\$ 526,767	\$ 194,277	\$ 225,000	\$ 1,548,500
<b>INDIRECT COSTS</b>		FTE x Dept Overhead Rate (\$49,500)	\$ 346,500	\$ 148,500	\$ 148,500	\$ 49,500	\$ -	\$ 346,500
<b>TOTAL PROJECT (Direct + Indirect)</b>			\$ 1,670,000	\$ 751,957	\$ 675,267	\$ 243,777	\$ 225,000	\$ 1,895,000

---

*Legislative Checklist to be submitted with all supporting materials for items scheduled on a Committee Consent Calendar*

---

Board of Supervisors File Number: \_\_\_\_\_

Department: Environment

Department Contact: Shawn Rosenmoss

Contact Phone Number: 415-355-3746

Type of Legislation on Consent Calendar:

- amending the ASO FY 2010-2011 to add three grant funded positions
- authorizations for the acceptance of grant funds;
- authorizations for the expenditure of grant funds;

**Description:** ASO amendment with authorization for the Department of the Environment to accept and expend a grant in the amount of \$1,670,000.00 from the U.S. Department of Energy's Retrofit Ramp-Up Program (funded by the American Recovery and Re-Investment Act) through the Association of Bay Area Governments (ABAG) for the deployment of energy efficiency projects in the City and County of San Francisco. San Francisco partnered with the Association of Bay Area Governments (ABAG), County of Los Angeles, County of Sacramento, and the County of San Diego in a four-region energy efficiency program (Retrofit California) that will retrofit 18,000 homes (single family and multifamily) to achieve reduction in home energy consumption, while creating 2,600 home energy retrofit jobs. The project will establish the infrastructure for a market-driven residential retrofit program which will stimulate the economy and create jobs while transforming energy markets in California.

**Presentation of Budgetary Information to Board Committees in Conformance with Budget Analyst Reference Guide**

- Summary budget information included
- Position Detail Information (included in budget)
- Equipment Detail Information
- Consultant/Contractor Expenditures

**Information provided in Conformance with Budget Analyst Reference Guide for the following:**

- Grants (authorization to apply for, accept and expend)

**Other Information Provided:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

---

## Budget Analyst Reference Guide Questions

---

**23. Describe the source of funds.** These funds are part of the ARRA and have come from the California Energy Commission's State Energy Program through the project lead, the Association of Bay Area Governments.

**24. Describe the grant-funded project clearly, concisely and in layman's terms.**

In late 2009, the U.S. Department of Energy (USDOE) released a solicitation for proposal from local governments for the implementation of innovative approaches to residential energy efficiency retrofits. Funds were from ARRA and provided an unprecedented opportunity to develop and implement a regional community-scale building retrofit program. San Francisco partnered with multiple other counties in California, ABAG, and the California Energy Commission to propose *Retrofit California*—a four-region energy efficiency program that would retrofit 48,000 homes (single family and multifamily) to achieve reduction in home energy consumption, while creating thousands of home energy retrofit jobs. The project will establish the infrastructure for a market-driven residential retrofit program will stimulate the economy and create jobs while transforming energy markets in California. Designed for scalability and transferability this program will create a model that can be replicated statewide and nationally.

Los Angeles County acted as the prime applicant and applied for a \$75 million grant to fund *Retrofit California*, which includes regional program development, local program development and implementation, evaluation, measurement and implementation and administration and reporting. USDOE awarded \$30,000,000 for *Retrofit California* (cutting goals commensurately) with the City and County of San Francisco receiving \$1,670,000.00

**25. Provide context and detail to the grant so that the proposed project can be compared to current operations.**

The Department of the Environment has operated energy efficiency and retrofit programs serving small businesses for more than 8 years. In addition, it currently serves small multi-unit buildings as well. This funding, along with other ARRA funds coming to the City through the Department of Energy's Energy Efficiency and Conservation Block Grant funds supports and expands the number of single family and multi-family residents that can be served. These funds will be released by County of LA to ABAG and then to City and County of San Francisco as a program implementer.

San Francisco is seriously committed to energy security and reducing its carbon emissions in order to meet the goals of the City's Climate Action plan, as well as develop local sources of energy. The City's Climate Action Plan calls for reducing the city's CO<sup>2</sup> emissions through the development of renewable energy sources. These funds will support the City's commitment to stimulating the economy, creating and retaining jobs, reducing total energy usage and improving energy efficiency.

The Department of the Environment is submitting an Accept and Expend Resolution for these funds in order to begin work at the same time that other counties are beginning their work to meet the terms of the funding entity. An ASO Amendment will be submitted after the 2010-11 Budget is finalized and a new Annual Salary Ordinance is in place and can be amended.

**26. Identify any ongoing costs for the Department once the grant funds expire, such as new personnel, new equipment, new leases, etc and how the Department would fund such future costs.** There will be no ongoing costs to the Department once grant funds expire.

**27. If the grant period has begun before the Department has been given Board of Supervisor approval, the Department should state why it is late in seeking approval and the resolution must provide for retroactivity.** NA—the project will not begin without board approval.

**28. State if the Department has accepted the grant or encumbered any expenses that the grant funds would reimburse the City. The Department should state why they have either accepted and/or began expending the grant funds before receiving approval.** NA

**29. If grant funds have been expended or encumbered, state the amount of funds that have been expended or encumbered and for what purpose.** NA

**30. If there is a significant delay in seeking Board of Supervisor approval from the time the grant period began, state how the proposed project would be completed in the remaining period of time available and/or if the Department has asked for or received an extension of the grant period.** The Department is required to begin work with the other counties such that planning and implementation can be coordinated. No extensions will be granted.

**31. If the grant is a multi-year grant, state the amount of the grant in future years and if future years would be included in the Department's budget. Include a proposed multiyear budget.** The grant is for \$1,670,000.00 over three years, with more funds being spent in the first year than in subsequent years (see attached budget).

**32. Indicate whether or not matching funds are required from the City, and if so, in what amount and the source of such matching funds.** Leveraged funds were required. The Department of the Environment is providing a match of \$225,000 through grant funding from Energy Watch, the Frank Foundation grant, and the Living Cities grant.

**33. If matching funds are not required but the Department is providing in-kind contributions for the grant, the Department should clearly state how you are proposing to provide in-kind contributions. Also state whether these in-kind contributions are new services to supplement the grant or existing services.** NA

**34. Provide a detailed budget by object including personnel detail, equipment detail and details on services/consultants/contractors. Each line item in the budget should be explained.** See attached

**35. The number of full time equivalent positions (FTE), the Job Title, Classification, and percentage of fringe benefits should be clearly stated in the budget of the grant. In most cases, any position funded under a grant should be "G" coded, or designated as a grant funded position that would terminate when the grant expires. The resolution should state that the position(s) should be "G" coded.** See attached budget.

**36. If a portion of the grant funds would be spent on contractual services, the Department needs to clarify how those contracts were awarded, whether a sole-source or an RFP process. If a contract is proposed to be awarded on a sole source basis, the Department needs to clearly explain why the Department chose the contractor. The Department should provide a detailed budget for the contractual services, including the number of hours dedicated to the project and the hourly rate if applicable.** SFE has secured subcontractors using the standard RFP process that will be used for this grant as well as other grants.

**37. If a Department plans on work-ordering grant funds to another Department, the Department should note what Department would receive the work-order and what services will be provided for the work ordered funds.** NA

**38. Indicate if indirect costs were included in the budget. If indirect costs are included, state how the indirect cost rate was determined. If indirect costs were not included, indicate why.** The grant includes \$346,500 for indirect costs that will be used for Departmental overhead.

**39. If travel is included in the budget, the Department should detail how many people are traveling, their identities (i.e. City employees or consultants), where they are going and for how long.** One staff will travel to annual statewide meetings, two staff will travel to Monterey for the American Council on an Energy Efficient Economy conference (sponsored by the USDOE) to participate in presentations, and other regional meetings depending on the requirements of the funding entity.

**40. All grant reports must include a form entitled the "Grant Application Information Form" with a Disability Access Checklist at the end.**

**ASSISTANCE AGREEMENT**

1. Award No. DE-EE0003562		2. Modification No.		3. Effective Date 06/01/2010		4. CFDA No. 81.128	
5. Awarded To LOS ANGELES, COUNTY OF Attn: ANA DAVILA 1100 NORTH EASTERN AVENUE LOS ANGELES CA 900633200			6. Sponsoring Office Golden Field Office U.S. Department of Energy Golden Field Office 1617 Cole Blvd. Golden CO 80401			7. Period of Performance 06/03/2010 through 06/02/2013	
8. Type of Agreement <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Other		9. Authority PL 110-140, EISA 2007 PL 111-5, Recovery Act 2009			10. Purchase Request or Funding Document No. 10EE004733		
11. Remittance Address LOS ANGELES, COUNTY OF Attn: ANA DAVILA 1100 NORTH EASTERN AVENUE LOS ANGELES CA 900633200			12. Total Amount Govt. Share: \$30,000,000.00  Cost Share : \$0.00  Total : \$30,000,000.00		13. Funds Obligated This action: \$30,000,000.00  Total : \$30,000,000.00		
14. Principal Investigator Howard Choy Phone: (323) 267-2006		15. Program Manager Carolyn C. Elam Phone: 303-275-4953			16. Administrator Golden Field Office U.S. Department of Energy Golden Field Office 1617 Cole Blvd. Golden CO 80401-3393		
17. Submit Payment Requests To			18. Paying Office OR for Golden U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 4517 Oak Ridge TN 37831			19. Submit Reports To See Attachment #2	
20. Accounting and Appropriation Data							
21. Research Title and/or Description of Project RECOVERY ACT: EECBG- RETROFIT CALIFORNIA							
For the Recipient				For the United States of America			
22. Signature of Person Authorized to Sign				25. Signature of Grants/Agreements Officer  Signature on File			
23. Name and Title			24. Date Signed		26. Name of Officer Karen L. Bahan		27. Date Signed 06/03/2010

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-EE0003562

PAGE OF  
2 | 2

NAME OF OFFEROR OR CONTRACTOR  
LOS ANGELES, COUNTY OF

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>DUNS Number: 017621702</p> <p>In addition to this Assistance Agreement, this award consists of the items listed in the Special Terms and Conditions, Provision 2, "Award Agreement Terms and Conditions."</p> <p>DOE Award Administrator: Chris Kudola E-mail: Chris.kudola@go.doe.gov Phone: 303-275-6038</p> <p>DOE Project Officer: Carolyn Elam E-mail: carolyn.elam@go.doe.gov Phone: 303-275-4953</p> <p>Recipient Business Officer: Howard Choy E-mail: HChoy@isd.lacounty.gov Phone: 323-267-2006</p> <p>Recipient Principal Investigator: Howard Choy E-mail: HChoy@isd.lacounty.gov Phone: 323-267-2006</p> <p>Electronic signature or signatures as used in this document means a method of signing an electronic message that--</p> <p>(A) Identifies and authenticates a particular person as the source of the electronic message;</p> <p>(B) Indicates such person's approval of the information contained in the electronic message; and,</p> <p>(C) Submission via FedConnect constitutes electronically signed documents.</p> <p>ASAP: Yes Extent Competed: NOT AVAIL FOR COMP Davis-Bacon Act: Yes Fund: 05795 Appr Year: 2009 Allottee: 31 Report Entity: 200835 Object Class: 41020 Program: 1005112 Project: 2004351 WFO: 0000000 Local Use: 0000000 TAS Agency: 89 TAS Account: 0331</p>				



U.S. Department of Energy

DE-FOA-0000148

DOE Environmental Management

Consolidated Business Center, Cincinnati, Ohio

On behalf of

Office of Energy Efficiency and Renewable Energy

## ***Retrofit California***

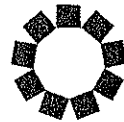
December 14, 2009

By

County of Los Angeles



In association with



**Association of  
Bay Area Governments**



Center for  
**Sustainable Energy**  
CALIFORNIA



**SMUD**

SACRAMENTO MUNICIPAL UTILITY DISTRICT  
The Power To Do More.™

**CONTENTS**

Project Objectives..... 1

    Introduction..... 1

    Building on Progress..... 1

    Goals ..... 1

    Objectives ..... 1

    How the Work Plan Will Meet the Goals and Objectives..... 2

Merit Review Criteria Discussion ..... 5

    Criterion 1: Leveraging and Sustainability ..... 5

    Criterion 2: Project Impact..... 6

        Economies of Scale and Critical Mass ..... 6

        Protecting Consumers and Lenders in Financing Programs..... 7

        Quantitative Impact ..... 7

    Criterion 3: Project Approach ..... 8

        Single-Family Program ..... 8

        Multifamily Program..... 9

        Commercial Program..... 10

        Quality Assurance ..... 10

        Evaluation, Monitoring, and Verification ..... 11

        NEPA Environmental, Health and Safety, Permitting, and Compliance Issues..... 11

    Criterion 4: Consortium Structure and Capabilities ..... 11

        Structure ..... 11

        Roles and Responsibilities ..... 12

Project Plan and Timeline..... 15

Relevance and Outcomes/Impacts..... 18

Roles of Participants..... 19

ARRA Information..... 19

## **PROJECT OBJECTIVES**

### **Introduction**

County of Los Angeles has joined with the Association of Bay Area Governments (ABAG), the California Center for Sustainable Energy (CCSE), and Sacramento Municipal Utility District (SMUD), along with the California Energy Commission, Air Resources Board, and a broad-based and highly qualified team of public and private partners, to present this proposal. Our *Retrofit California* program will rapidly accelerate building energy retrofits across the state and achieve deep market penetration in focused geographic areas. This proposal unites four geographically, economically, and demographically diverse regions—Los Angeles, San Francisco Bay Area, Sacramento, and San Diego—that comprise 75% of California’s population. The assembled participants represent a diversity of program expertise and draws together leadership at the local, state, and national level. *Retrofit California* will enable California to demonstrate innovative and impactful program models that are highly transferrable, both statewide and nationally.

### **Building on Progress**

California is enacting bold and ambitious building efficiency policies and programs far ahead of other states. These initiatives include the state’s 2010–12 goal of 130,000 “whole house” home energy retrofits, and the Property Assessed Clean Energy (PACE) financing districts that are being developed throughout the state. In addition, the state’s longstanding Public Goods Charge (PGC) on utility bills provides a regulatory model for continued funding of large-scale, post-stimulus building retrofit efforts in other states. These initiatives build on a long history of state leadership in building energy efficiency, including California’s stringent Title 24 building standards, which exceed the International Energy Conservation Code and ASHRAE 90.1. *Retrofit California* builds on these achievements and breaks new ground by testing focused new program concepts that overcome key market barriers.

### **Goals**

The goals of *Retrofit California* mirror those of the Recovery Act: (a) **energy savings**, (b) **job creation/preservation**, and (c) **economic recovery**. The proposed program has been designed in alignment with the guiding principles set out in the DOE’s Retrofit Ramp-Up FOA, to achieve self-sustaining market momentum, documented economies of scale, and proof of innovations that can be replicated across the United States.

### **Objectives**

To achieve these goals, *Retrofit California* has identified a set of three core program objectives that address the major barriers to market transformation and guide program design. These three objectives are aimed at spurring comprehensive building energy retrofits on a broad scale.

1. **Provide attractive new financing options to address the high upfront cost of retrofits.** Energy retrofits require significant up-front capital investment, while payback occurs over many years. Financial incentives to offset up-front costs often do not reward whole-building, performance-based solutions and proper loading order. Long pay-backs leave property owners at risk of forfeiting part of their investment at time of sale. Lack of well-documented business case models and standardized analytical methodologies leave multifamily property owners ill-equipped to evaluate the technical and economic potential

for retrofitting their properties. Furthermore, there is a lack of affordable capital, limiting retrofitting opportunities, particularly in the affordable housing sector.

*Retrofit California* will demonstrate PACE and other innovative financing mechanisms to reduce or remove these barriers for a wide range of projects and population segments.

2. **Demonstrate more effective marketing and outreach methods to inform and motivate property owner participation.** Property owners are typically unaware of the benefits of comprehensive energy retrofits. Retrofit programs that rely primarily on economic arguments to drive participation ignore a broad range of behavioral factors and non-energy benefits that are known to strongly motivate or discourage action.

*Retrofit California* will employ an array of innovative outreach methods that reflect current behavioral science research; more effectively communicate current value propositions, and create new ones.

3. **Streamline participant, contractor, and administration processes to reduce the high transaction costs created by an inefficient delivery model.** The whole-building performance-based approach to home energy retrofitting requires advanced building science training and substantial field experience at multiple stages: including the customer acquisition, home audit, work scope development, and project management. Managing large numbers of small projects at scale requires well developed systems and a high degree of specialization and business acumen. Lack of uniform guidelines, standards, and procedures impedes training and quality control efforts. In addition, delivery and incentive programs are typically far too costly due to the lack of modern IT systems to automate and streamline administrative functions.

*Retrofit California* will use new cutting-edge data and decision systems to reduce transaction costs for both contractors and sponsored funding programs. These innovations can contribute greatly to the growth and maturity of the building performance industry that will be capable of delivering building energy performance with strong momentum toward a mass scale at more reasonable cost. At the same time, the program will raise public confidence and trust in the value of building performance retrofits through rigorous contractor training, public education, quality assurance, and credible evaluation and feedback.

### **How the Work Plan Will Meet the Goals and Objectives**

California offers many unique and valuable opportunities, and the *Retrofit California* team has developed an unusually broad and creative range of innovative concepts. The program therefore takes a portfolio approach, employing a variety of innovations flexibly in different locations. All are to be organized in a research framework that will permit attribution of effects among the innovations and maximizes value for transferability beyond California. Consistent with our program objectives and the underlying market barriers, these innovations fall into three categories:

1. Innovative financing tools
2. Advanced outreach and marketing strategies
3. Efficient implementation and delivery

By delivering these innovations, *Retrofit California* will achieve its stated objectives, reduce or remove primary market barriers, and contribute to Recovery Act goals by (a) generating almost \$18 million in annual energy savings, (b) creating or preserving 6,561 jobs, and (c) contributing an economic impact of more than \$604 million. Tables 1–3 highlight *Retrofit California's* innovations.

**Table 1. Financing Innovations**

Strategy	Building Type(s)	Benefits
PACE financing	All	Repayment on property tax bills, terms up to 20 years, transfers with property upon sale
On-Water-Bill financing	Single-family, multifamily	Payment obligation assigned to the water meter location rather than the customer, serve renters as well as property owners, address the energy impacts of water use, expand financing to measures ineligible for PACE
Revolving loan fund	Multifamily affordable	Loan loss reserves to attract private capital to this underserved segment, partnering with Enterprise Community Partners and other intermediaries
Business case analyses	Multifamily	Demonstrate actual performance of previously retrofitted projects, attract private investments
New Incentive Mechanisms	Single-family, multifamily	Attract participation, reduce customer's upfront investment costs
Energy-efficient utility allowances	Multifamily affordable	Enable affordable housing providers to charge incrementally more rent for energy-efficient units without exceeding unit affordability restrictions.

**Table 2. Marketing and Outreach Innovations**

Strategy	Building Type(s)	Benefits
HVAC service provider partnerships	Single-family, multifamily, commercial	Leverage existing marketing and service delivery channels, such as Beutler, to target property owners in need of HVAC services
Retail home improvement partnerships	Single-family	Leverage in-store marketing and service delivery channels of Lowe's and ACE; target home owners and contractors engaged in home improvement projects
Community-based social marketing	Single-family	Apply behavioral research from Dr. Wesley Schultz (CSU San Marcos), Dr. Carrie Armel (Stanford Precourt), and others to leverage existing social networks and communication channels, generate word of mouth, create community visibility and recognition mechanisms, establish new social norms, and align with other motivators of human behavior
Door-to-door outreach	Single-family	Geographically target campaigns to high-prospect neighborhoods, leverage existing social networks and communication channels, generate word of mouth, create community visibility / recognition mechanisms

Strategy	Building Type(s)	Benefits
Property-owner organization outreach	Multifamily, Commercial	Leverage existing organizational structures and communication channels, specifically Apartment Owner Associations, Chambers of Commerce, Building Owners and Managers Association, Home Owners Associations, Real Estate Investment Trusts, the Nonprofit Housing Association of Northern California, and the Southern California Association of Nonprofit Housing
Green building labeling	Single-family, multifamily	Create new value propositions through enhanced market value of improved property; bundle energy efficiency with full spectrum of quality-of-life and environmental benefits
Business Improvement Districts (BID)	Multifamily, Commercial	Leverage existing organizational structures and communication channels; reach the public through BID's existing marketing efforts; emphasize energy efficiency benefits as part bundled package of district-scale quality of life enhancements

**Table 3. Project Delivery Innovations**

Strategy	Building Type(s)	Benefits
Whole neighborhood delivery	Single-family, multifamily	Reduce cost of work scope development and delivery to tracts of uniform housing stock
Bulk purchase of equipment & services	Single-family, multifamily	Leverage "Energy Star® Quantity Quotes" and HUD bulk purchase system, obtain discounted energy-efficient equipment and services
Technical assistance	Multifamily	Provide feasibility studies, fact sheets, and white papers to support retrofit decisions, build contractor and Physical Needs Assessment Consultant capabilities to provide technical support
Multifamily "Home Performance with Energy Star"	Multifamily	Extend HPwES's whole-building, performance-based approach to multifamily applications
Commercial deep energy reductions	Commercial	Demand reduction strategies such as thermal energy storage, bundled with energy efficiency measures, will increase the cost-effectiveness of packages offered to commercial building owners, allowing the incorporation of less cost-effective measures to achieve deeper reductions by the overall offering

Strategy	Building Type(s)	Benefits
Advanced project management software for contractors	Single-family	Enable more successful contractor business models by providing in-field tools for analysis, decision-making, and quality control for contractors with varying levels of experience; support uniform application of best practices; use data-driven quality assurance to flag and investigate outliers; provide real-time monitoring, reporting, and analysis of key business performance metrics
Advanced program administration software	All	Streamline data handling capabilities to submit audit data electronically, track program performance with online real-time dashboards, pay incentives instantly, and report on metrics including energy usage and GHG emissions reductions, renewable energy generation, jobs created, number and amount of projects financed, number of contractors/workers trained, number of buildings and residences retrofitted, and utility bill savings by participants

**MERIT REVIEW CRITERIA DISCUSSION**

**Criterion 1: Leveraging and Sustainability**

Retrofit California will leverage a diverse range of funds, including limited term opportunities such as Energy Efficiency and Conservation Block Grant (EECBG) formula grant funds, State Energy Program (SEP) funds, and in-kind staff time and resources as well as potential long-term sources including utility incentives and private investment. Leveraged resources are summarized in Table 4 below.

**Table 4. Retrofit California Leveraged Resources**

Leverage Source	Amount
EECBG	\$21,590,000
SEP	\$45,000,000
Utility Incentives	\$38,985,000
Private Capital (PACE, EEM's and other)	\$423,075,000
<b>Total</b>	<b>\$528,650,000</b>

As Table 4 indicates, leveraged resources exceed DOE expectations for achieving 5:1 leverage.

Retrofit California is explicitly designed to deliver meaningful and sustainable market transformation impacts that continue to multiply beyond the Retrofit Ramp-Up funding horizon. The Retrofit California program model builds on four key **financing and incentive mechanisms** that will continue indefinitely and offer substantial growth potential:

- **PACE.** Retrofit California will promote the use of PACE financing to leverage private investment and ensure sustainability. Each participating region will offer a PACE program which will access private capital markets to provide the upfront cost for energy efficiency measures. Administrative costs are passed through to participants so the program can continue to provide financing with no additional cost to the municipality.

- **Utility incentives.** California's Investor-owned Utilities (IOUs) will program \$694 million for statewide residential energy efficiency programs in 2010–2012, of which \$113 million is earmarked for whole-house programs targeting single-family homes. The state is likely to authorize additional larger amounts in the following years to meet climate action goals. *Retrofit California* will provide added justification for those dramatically increased utility and governmental investments in whole-building retrofit strategies for 2013–2020 and beyond
- **Revolving loan funds.** *Retrofit California* funds will provide seed funding of \$4,000,000 for a revolving loan fund for affordable housing projects. The fund is expected to attract an additional private capital and provide ongoing financing indefinitely.
- **Energy-efficient Mortgages (EEMs) and Energy Improvement Mortgages (EIMs)** enable a borrower to add the cost of cost-effective energy efficiency improvements to an already approved mortgage loan with no additional down payment, up to 5% of the home value.

In addition to attracting greater long-term investment in building energy retrofits, the program will achieve sustained market transformation through **marketing and outreach** strategies that

- Use innovative marketing strategies and new partnership channels to lower contractors' cost of customer acquisition and expand the pool of property owners who are motivated to take action.
- Enhance market value for energy retrofits through energy ratings and green home labeling.

*Retrofit California* will enable the contractor industry to scale up to high-volume production through **project delivery** strategies that

- Reduce project delivery costs by demonstrating more cost-effective retrofit solutions, modeling scopes of work based on common retrofit scenarios, utilizing high-efficiency large-scale program management tools and methods, and streamlining deployment methods for neighborhoods with uniform housing stock.
- Provide a credible, transparent, and visible contractor quality assurance process and require participating contractors to comply with national standards such as Building Performance Institute (BPI) accreditation and Home Performance with Energy Star. Extend the Home Performance with Energy Star model to address more effective program designs and stronger applicability to multifamily properties.
- Select, deploy, and refine a new fully automated process management software system to streamline overall program management and help home performance contractors rapidly increase their business volume while improving the quality and economy of their retrofit services.

In combination, these strategies will foster a mature building performance contracting industry capable of delivering comprehensive-energy retrofits on a mass-scale with fewer subsidies.

## **Criterion 2: Project Impact**

### ***Economies of Scale and Critical Mass***

*Retrofit California* is designed to test and prove program approaches that can attain economies of scale and critical mass in focused geographic areas, including:

- Four-region consortium of governments and market leaders to share common technology infrastructure, program approaches, and purchasing power



- Advanced software to enable contractors and program administrators to scale quickly
- Leveraging private sector promotional capacity through retail home improvement outlets, single-trade contractors and general contractors
- Advanced community-based outreach (e.g. schools, faith-based communities, employers)
- Bulk purchase of labor and common materials to drive down costs
- Large-scale PACE financing to drive down the per-property administrative costs and provide for investment grade PACE programs, ensuring long-term sustainability and lower costs for consumers

**Protecting Consumers and Lenders in Financing Programs**

Local governments have to be very concerned about protecting property owners from risk. All PACE programs included in the *Retrofit California* program will be in compliance with the White House PACE Framework, as determined by the Department of Energy. The following are PACE program requirements and consumer protections that are generally standard in California:

1. Project cost not to exceed 10% of the assessed value of the property
2. Project cost plus all mortgages do not exceed property value
3. Positive equity in the property
4. No property tax delinquencies in previous three years
5. No default or foreclosure notice in previous five years
6. No involuntary liens, defaults or judgments on property in excess of \$1,000
7. Energy audit required that provides cost-effectiveness for each measure in rank order
8. Require lender notification of the impending tax lien

**Quantitative Impact**

The following program impacts assume continued investment of PGC funds in IOU energy efficiency programs beyond 2012 at or above the 2010-12 investment level of \$3.1 billion. *Retrofit California's* demonstrable success will help ensure that a larger percentage of the 2013-15 and later funding will be prioritized for whole building retrofit programs. PACE and other financing tools will provide a platform for continued growth. California's aggressive energy and climate policy goals and mandates will support the growth and sustainability of these programs. No EECGB or other federal funding is assumed beyond 2012. The following table summarizes program impacts. (See Appendix G for a more detailed Program Impact Table.)

**Table 5. Program Impacts**

Impact Metrics	2010-2012	2013-2015
Number of jobs created	6,561	25,112
Number of building retrofitted	45,606	228,030
Reduction of annual purchased energy consumption	\$18 million and 947 billion BTUs	\$90 million and 4,735 billion BTUs
Average emission reductions	0.045 MMT CO <sub>2</sub> e	0.223 MMT CO <sub>2</sub> e

**Criterion 3: Project Approach**

The *Retrofit California* portfolio of programs focuses on testing innovative financing mechanisms, advanced outreach and marketing tactics, and streamlined delivery methods. These cutting edge programs are designed to overcome the market barriers described in the Project Objectives section above. They will test program models and techniques in specific neighborhoods in single-family homes, multifamily buildings, and commercial buildings.

**Single-Family Program**

**Financing and Incentives**

All participating regions will have active PACE districts in place and will bundle PACE financing with different program approaches and incentives. The PACE financing programs include: City of San Diego, Los Angeles County, City of San Francisco, Sonoma County, and the CaliforniaFIRST program sponsored by the California Statewide Communities Development Authority. CaliforniaFIRST will launch in early 2010 with 14 counties statewide, including Alameda, Santa Clara, San Mateo, Solano, San Diego, and Sacramento. Within the ABAG region, Sonoma County Transportation Agency (SCTA) will demonstrate On-Water-Bill (OWB) financing mechanism for energy retrofits. LA County, CCSE, and SMUD will offer direct incentives.

**Table 6. Single-Family Incentives**

# units	37,364
Single-family budget	\$44,637,000
Incentives	\$14,312,000

**Marketing and Outreach**

We will roll out a suite of strategies for obtaining deeper market penetration:

- **HVAC service provider partnerships:** Work with an established group of contractors in the utilities’ HVAC tune-up programs, with commitments from some of the largest, to expand their core competencies or build alliances to include home performance services.
- **Retail home improvement partnerships:** Partner with national home improvement retailer Lowe’s and local Ace affiliate Cole Hardware to offer customers access to affordable home performance services. Build on the existing relationship between Lowe’s and Recurve, a leading home performance contractor.
- **Community-based social marketing:** Leverage the behavioral science expertise of Dr. Wesley Schultz (CSU San Marcos) and Dr. Carrie Armel (Stanford Precourt Institute for Energy Efficiency). Work through schools, faith-based organizations, employers, governments, and community organizations to leverage resources, build awareness, and motivate participation. Develop community-wide contests in which partnering organizations encourage member households to complete retrofits within a given timeframe. Create a sense of urgency to take action through limited time offers and declining incentive levels over time.

**Implementation/Delivery**

We will pursue two strategies for streamlining service delivery and reducing transaction costs:

- **Whole neighborhood approach:** For targeted neighborhoods of uniform housing stock, develop uniform scopes of work with reduced diagnostic requirements that can be

delivered by pre-selected contractors. Target neighborhoods that offer the greatest potential energy savings.

- **Advanced project and program management software:** Evaluate Recurve and comparable software systems for their ability to provide in-field tools for analysis, decision-making, and quality control for contractors with varying levels of experience. Evaluate greenNet.com, ProjectDX, and comparable IT systems for their ability to support economical large-scale home performance program management.

**Multifamily Program**

Variations of the Multifamily Program will be offered in the ABAG, LA, and San Diego regions. Program design will address both market rate and affordable housing, with particular emphasis on overcoming the split incentives barrier that limits tenant improvements.

**Financing and Incentives**

In addition to PACE financing, *Retrofit California* will develop two new incentive mechanisms:

- **Green Label Rebates.** Test a new incentive structure, modeled on New York State Energy Research and Development Authority’s long-standing multifamily program, including rebates for green building labeling.
- **Green Affordable Retrofit Fund.** Seed a revolving loan fund that will make loans to affordable housing providers to help pay for energy- and water-efficient capital investments in their existing properties. Engage with Enterprise Community Partners and Local Initiatives Support Corporation (LISC) to help attract private capital.

We propose to work with at least four Housing Authorities in the LA and ABAG regions to establish energy-efficient utility allowances, consistent with HUD guidelines.

**Table 7. Multifamily Incentives**

# units	7,869
Multifamily budget	\$15,713,000
Incentives	\$5,449,925

**Marketing and Outreach**

We will offer program services through property-owner organizations, contractors and service providers, and district-scale associations, including Business Improvement Districts. For market-rate housing, we will extend the multi-benefits strategy to include an optional green building label, GreenPoint Rated, to enhance property values through rent premiums, lower vacancy rates, and lower tenant turn-over rates. GreenPoint Rated is the leading residential green building standard in California.

**Implementation/Delivery**

*Retrofit California* will create a “toolbox” of resources to demonstrate the value proposition of retrofits to property owners and facilitate their participation in the program. We will:

1. Develop packages of retrofit solutions for typical use cases; e.g., central heating system repair and replacement, building shell improvements, lighting and appliance replacement upon unit turn-over, common area retrofits, and renewable energy installations

2. Provide a robust system of field verification and quality assurance modeled on Home Performance with Energy Star; train professionals wishing to provide HERS and GreenPoint Rated verification services. Leverage LISC's training content for green Physical Needs Assessments (PNAs).
3. Establish the business case for energy efficiency improvements through technical assistance, case studies, fact sheets, white papers, and presentations that document actual building improvement work scopes and costs, actual utility bill savings and other benefits, return on investment, market value of green building investments

### **Commercial Program**

Retrofit California Commercial Program builds on successful program models in Alameda County (Smart Lights) and San Francisco (Energy Watch Commercial Plus). These programs provide field-tested models for delivering turn-key building retrofit services.

#### **Financing and Incentives**

Retrofit California will offer PACE financing to commercial building owners. CCSE and SMUD will offer supplementary incentives. In addition, we will help customers access on-utility-bill financing.

**Table 8. Commercial Incentives**

# sq. ft.	5,890,000
Commercial budget	\$2,150,000
Incentives	\$970,000

#### **Marketing and Outreach**

Primary marketing channels will be through direct outreach to building owners and managers, as well as through equipment repair and installation contractors. San Diego will add a marketing campaign to professional service providers such as banking and financial advisors.

#### **Implementation/Delivery**

The Commercial Program will provide turn-key lighting and HVAC retrofits to small and mid-sized commercial buildings using a combination of City staff and installation contractors. San Francisco will use Retrofit Ramp-Up funds for building-specific monitoring and analysis to integrate peak load reduction strategies that increase overall project cost-effectiveness, allowing the incorporation of additional, though less cost-effective measures.

To enhance replication to other jurisdictions, this project will create a program implementation toolkit with procedures manuals, database structure including input and output forms, administrative forms, job descriptions, contractor agreements, contract samples, training materials, marketing materials, technical specifications, case studies, evaluation forms, and other tools required to run these programs. Each will be set up for easy adaptation by other jurisdictions.

#### **Quality Assurance**

Retrofit California will work collaboratively with the utility-administered building retrofit programs to employ strict yet efficient quality assurance protocols that will achieve high performing installations and verifiable results. The program will also build on the quality assurance and verification methodologies for multifamily buildings under development through Stopwaste.Org's existing local investments and initiatives.

**Evaluation, Monitoring, and Verification**

Retrofit California will collect detailed project-specific data to support DOE’s and the CPUC’s EM&V efforts, including energy usage and GHG emissions reductions, renewable energy generation, jobs created, number and amount of projects financed, number of contractors/workers trained, number of buildings and residences retrofitted, and utility bill savings by participants. Project-specific data will include pre- and post-retrofit home performance test results and billing data. For selected homes, we will assemble end-use metered data through our partnership with Stanford Precourt’s smart meter project. We will leverage additional technical expertise from Lawrence Berkeley National Laboratory to assist in analysis in the commercial sector. Additional program EM&V efforts will focus on process evaluation.

**NEPA Environmental, Health and Safety, Permitting, and Compliance Issues**

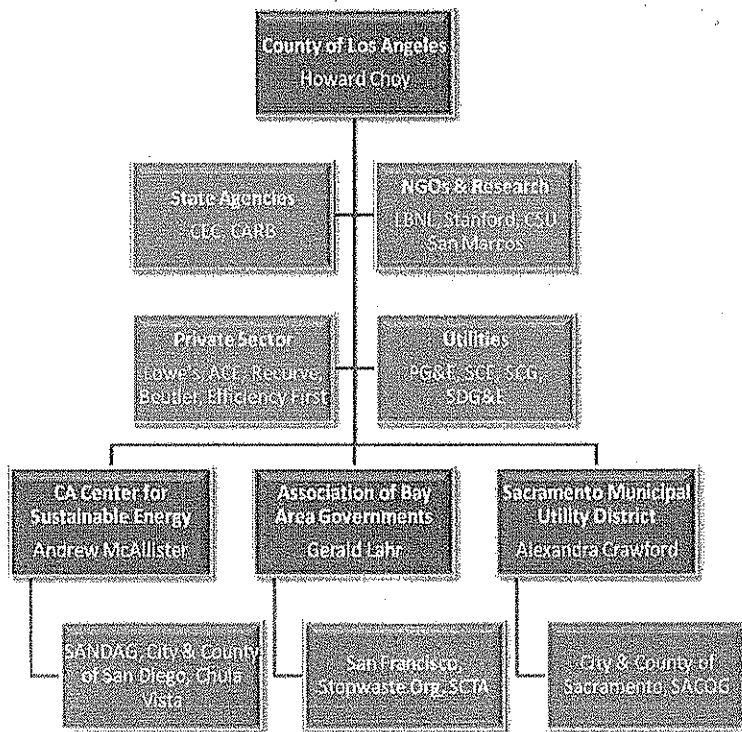
Retrofit California provides incentives, financing, and support for property owners to complete energy efficiency and cost effective renewable energy retrofits. The program will not undertake any projects directly, so the private building owners and contractors, rather than the program team, will be responsible for environmental health and safety, permitting, and compliance issues.

**Criterion 4: Consortium Structure and Capabilities**

**Structure**

Los Angeles County has established a diverse consortium of public and private entities representing leading organizations and individuals involved in building energy retrofit programs both in California and the nation.

**Figure 1. Organizational Chart**



The three regions outside of Los Angeles County (i.e., San Diego County, the nine-county San Francisco Bay Area, and the six-county Sacramento Area), will be represented by lead agencies (Subawardees) who will receive and disburse subawards on behalf of their regions, as shown in the Organization Chart. A designated PI for each Subawardee will supervise disbursements within the region. Roles and responsibilities of the PIs and participating regions will be specified in a Memorandum of Understanding (MOU) that the Prime will execute with each Subawardee. The MOU will include provisions for assigning to the Subawardees the same obligations and accountability provisions that DOE will require of the Prime. The Prime will provide technical leadership and management direction to help ensure that the *Retrofit California* program delivers its goals on time, within budget, and in a safe and environmentally acceptable manner.

### ***Roles and Responsibilities***

#### ***County of Los Angeles***

***County of Los Angeles*** is developing one of the largest PACE building retrofit programs in the United States, which is intended to cover all 88 cities in the County and encompass over 10 million residents. County of Los Angeles is the principal fiscal and managing agent for *Retrofit California*. Howard Choy is the Principal Investigator. Mr. Choy's career in the energy industry includes assignments with the nation's largest municipal utility, as a utility industry consultant and as Energy Division Manager for Los Angeles County. With the County he oversees a staff of over 100 people that manages a \$200 million annual utilities program, has implemented over \$150 million in energy efficiency projects, and developed an enterprise energy management information system for nearly 200 large, county buildings. The County has contracted with a uniquely qualified program consultant team, led by Bevilacqua Knight, Inc, that brings together the recognized leading building energy retrofit expertise in California.

- ***Bevilacqua Knight, Inc.*** (BK<sub>i</sub>) specializes in designing and implementing community-scale building retrofit programs and policies for government and utilities. BK<sub>i</sub> is the California Building Performance Contractors Association's home performance program designer and administrator, operating comprehensive home retrofit programs in the state, including large training and delivery programs in the PG&E and Southern California service areas.
- ***Renewable Funding*** specializes in innovative solutions for clean energy financing and has been active with federal agencies, major lending institutions, and leading law firms in developing national best practices for PACE programs. The founders of Renewable Funding pioneered the PACE strategy used in Berkeley, California, known as BerkeleyFIRST. The firm now provides services for a number of communities, including Boulder County, Colorado, and San Francisco, California, and has been selected to administer and finance a California statewide program with a projected loan volume of \$250 million.
- ***Build It Green*** (BIG) is a nonprofit 501(c)(3) corporation that designed and implements GreenPoint Rated for Existing Homes, the only comprehensive green building program for existing homes in the country, incorporating Home Performance with Energy Star and comprehensive third-party verification in its foundation. BIG will be the lead partner for workforce development coordination, designing the marketing strategy, and measuring energy and greenhouse gas savings.
- ***The Energy Coalition*** has been a leader in California local government energy efficiency programs. In 1992, The Energy Coalition launched the Irvine Energy Efficiency Initiative, the first local government partnership between an IOU and local government. By 2003, the program expanded to ten cities and became the Community Energy Partnership, which

remains active throughout Southern California. The Energy Coalition has used its expertise in grassroots community outreach to design city-specific strategic plans, community outreach activities, and energy saving products/services.

- **South Bay Cities Council of Governments (SBCCOG)/South Bay Environmental Services Center (SBESC)** is a Joint Powers Authority (JPA) of 16 cities in the South Bay region that share the goal of maximizing the quality of life and productivity of their area. SBESC, a program of the SBCCOG, leads stakeholder, marketing, and outreach effort within the SBCCOG's cities and County Unincorporated areas.
- **California Building Performance Contractors Association (CBPCA)**, a nonprofit trade association, will participate in its capacity as a state-certified HERS Provider, training organization, Energy Star Partner, BPI certifying agent, and quality assurance manager.

### **San Diego Region**

**California Center for Sustainable Energy (CCSE)** is a nonprofit 501(c)(3) corporation that helps residents, businesses and public agencies save energy, reduce grid demand and generate their own power through a variety of rebate, technical assistance and education programs. CCSE works actively with local governments and other regional stakeholders, including implementation of the City of San Diego's PACE program as part of the Renewable Funding team. Andrew McAllister serves as the Director of Programs and is the regional PI for *Retrofit California*. With over 17 years of experience in the fields of energy efficiency and renewable energy, Andrew oversees CCSE's distributed generation programs including the California Solar Initiative, Self-Generation Incentive Program, and Solar Water Heating programs.

### **San Francisco Bay Area**

**Association of Bay Area Governments (ABAG)** is the official comprehensive planning agency for the San Francisco Bay region. The 101 cities and nine counties within the Bay Area are voluntary members of ABAG. ABAG will act as fiscal agent, reporting entity and coordinating body for the participating agencies in the region. Gerald Lahr will serve as the PI for the Bay Area region.

**StopWaste.Org** is a JPA that represents the County of Alameda and the 14 cities within the county. StopWaste.Org has pioneered the development of green building programs in California and is implementing a community-scale building retrofit program called Green Packages. The lead at StopWaste.Org, Wendy Sommer, started as a planner with StopWaste.Org in 1991 and since 2000 has been a Senior Project Manager, overseeing \$10 million in various programs.

**City and County of San Francisco** operates a \$6 million annual energy efficiency program for multifamily and commercial buildings with funding from utility ratepayers under a contract with PG&E. Ramp Up funded activities will be fully managed using this infrastructure. Cal Broomhead manages SF's Energy and Climate Division since 2000 and has 25 years of industry experience.

**Sonoma County Transportation Authority (SCTA)** is a JPA representing the 10 cities in Sonoma County. SCTA has been designated the Regional Climate Protection Authority for the design and implementation of the county's building retrofit program. Dave Brennan, Program Manager, brings 30 years of experience in government, most recently as City Manager for the City of Sebastopol. He developed Sebastopol's strategic plan for climate protection and created a \$4 million solar power and energy efficiency capital improvement program.

**Sacramento Region**

**Sacramento Municipal Utilities District (SMUD)** is the sixth largest publicly owned utility in the country in terms of customers served, and their innovative energy programs are known throughout the state and nation. For the past three years, SMUD has ranked number 1 in California in J.D. Power’s residential customer satisfaction survey. SMUD’s efforts in *Retrofit California* will be closely coordinated with related activities of the region’s cities and counties. Alexandra Crawford will serve as the region’s PI and will lead coordination efforts with a variety of civic and community partners. Her role at SMUD includes managing technology and process improvement projects, designing new programs and services and providing multi-year strategic planning.

**State Agencies**

The **California Energy Commission (CEC)** and the **California Air Resources Board (CARB)** will be partners in the program to ensure statewide consistency of program roll-out, consistency with state policy directives, and dissemination of best practices and program models statewide. The CEC will dedicate staff from its High Performance Buildings and Standards Office to provide technical and programmatic assistance. The CEC has developed a mapping and reporting system to collect and disseminate OMB, DOE and Energy Commission required data for all ARRA-funded programs, which it will put at the disposition of the consortium. Additional partners are described below.

**Table 9. Partners**

Partners	Role
<b>Private Sector</b>	
Lowe's Corporation	60-year-old chain of home improvement centers with more than 1,675 stores establishing home energy efficiency centers in select stores and partnering with local contractors to promote Home Performance with Energy Star.
Cole Hardware	Ace Hardware (4,400 stores in US) affiliated local chain of four stores, all in San Francisco. Key partner for retail delivery channel.
Recurve	Leading home performance contractor, Lowe's partner for retrofit services, and developer of Recurve system, an integrated hardware/software package designed specifically for energy efficient building, to help contractors grow their businesses.
Enalays Corporation	Brings an innovative web-based application designed for energy-related program administrators, to streamline overall program administration, track program performance, and report on metrics
Beutler Corporation	Sets the standard for excellence in the HVAC trade, with six decades of experience and more than 500,000 installations. Key partner for HVAC delivery channel and currently expanding into comprehensive retrofits
<b>Utilities (IOUs)</b>	
PG&E, SCE, SoCalGas, SDGE	Ensure alignment with utility energy efficiency programs, provide direct access to customers, existing rebate and incentive programs, and technical expertise



Partners	Role
<b>NGOs &amp; Research Institutions</b>	
Efficiency First	National nonprofit trade association that unites the Home Performance workforce. Share best practices and provide feedback from contractors on program design.
Stanford University Precourt Energy Efficiency Center	Studying the potential for large-scale energy reduction through smart meters and sensing technologies. <i>Retrofit California</i> will provide field opportunities for the Center to gather valuable data on how homeowners, once aware of their energy use, become interested in energy retrofits.
Lawrence Berkeley National Laboratory (LBNL)	Assist with overall program design, EM&V design, and the implementation and analysis of energy efficiency and demand reduction strategies for commercial buildings. LBNL will also assist in the development of an optimization tool.

**PROJECT PLAN AND TIMELINE**

The Team will take an adaptive management approach to program design and implementation, emphasizing an iterative decision-making process to reduce uncertainty over time and maximize prospects of success. This approach mirrors the Building America Stage Gate process. Two key iterations will guide our decision-making:

- **Iteration 1, Planning:** Within three months of commencement, we will complete a Project Management Plan (PMP), which will validate or modify initial planning assumptions and support any needed adjustments in the program concepts. The PMP will provide a concise summary of the technical objectives and approach for each task; a detailed reporting plan, schedule, and expenditures for each task; major milestones and decision points; and criteria upon which GO/NO decisions will be based.
- **Iteration 2, Phase 1 Implementation:** Within 12 months of commencement, program implementation will be far enough advanced to permit a mid-course process evaluation. The focus will be to determine whether previously defined success criteria have been met, review planning assumptions for continued validity, and distill lessons learned. The results will inform any mid-course adjustments and Phase 2 investment decisions.

For work plan purposes, the program is broken into three phases, Planning, Implementation Phase 1, and Implementation Phase 2, with EM&V activities occurring concurrently throughout.

**Table 10. Planning Phase Work Plan and Deliverables (Q3, 2010)**

Single-family Program	Multifamily Program	Commercial Program
Finalize PACE programs across all regions		
Develop marketing plans		
Develop program implementation plans		
Assemble qualified contractor lists		
Establish bulk purchasing mechanisms		
Design incentive mechanisms		
Establish consistent QA protocols with utility programs		
Evaluate and field test program administration software		
Evaluate and field test contractor project management software	Establish affordable housing revolving loan fund and recruit private investment	Develop program implementation toolkit
Design community contests	Recruit participating Housing Authorities	
Design On-Water-Bill financing mechanism		
Prepare neighborhood work scopes and campaign strategies		
<b>Deliverables</b>		
Project Management Plan		
PACE programs launched across all regions		

**Table 11. Phase 1 Work Plan and Deliverables (Q4, 2010–Q2, 2011)**

Single-family Program	Multifamily Program	Commercial Program
Formalize HVAC service provider partnerships		
Formalize retailer partnerships	Establish BID partnerships	Recruit building owners and professional service providers
Build community-based coalitions	Recruit industry allies: property owner associations, trade associations	
Develop neighborhood-scale work scopes	Prepare case studies, white papers, fact sheets	Evaluate peak-load reduction strategies
Launch bulk purchasing program	Develop retrofit packages, QA, verification, quantification methods, training content	
Launch marketing campaigns and scale up PACE programs		
	Provide project technical assistance & feasibility studies	
	Prepare energy-efficient utility allowances	
Retrofit projects, process financing and incentive applications		
Conduct QA		

Single-family Program	Multifamily Program	Commercial Program
<b>Phase 1 Deliverables &amp; Performance Targets:</b>		
Incentives 25% subscribed		
Formal agreements retail, HVAC and community partners	Formal agreements with BIDs	Demand reduction business case documentation
Field data supporting viability of neighborhood-scale program model	Business case documentation	
Field data supporting viability of community-based social marketing approach	\$4 million in private capital for affordable housing loan fund	
	Loan fund 50% subscribed	

**Table 12. Phase 2 Work Plan and Deliverables (Q3, 2011–Q2, 2013)**

Single-family Program	Multifamily Program	Commercial Program
Implement Phase 2 program adjustments as necessary		
Expand marketing campaigns		
Retrofit projects, process financing and incentive applications		
Conduct QA		
<b>Phase 2 Deliverables &amp; Performance Targets:</b>		
Incentives 100% subscribed		
Retrofit 25,114 homes	Retrofit 7,869 housing units	Retrofit 5,890,000 sq. ft.

**Table 13. EM&V Work Plan and Deliverables**

Release RFP and select EM&V contractor (Q3, 2010)
Develop data collection and evaluation plan (Q3, 2010)
Conduct Phase 1 process review (Q2, 2011)
Conduct Phase 2 process evaluation (Q1 & Q2, 2013)
Tract and report program impacts (ongoing)
EM&V report (Q2, 2013)

**Table 14. Timeline**

	Year1				Year2				Year3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning Phase	█											
Phase 1 Implementation		█										
Phase 2 Implementation					█							
Monitoring/Verification	█											█

**Table 15. Quarterly Spending Plan (\$000)**

Year1				Year2				Year3			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
\$6,790	\$6,791	\$6,791	\$6,791	\$6,664	\$6,664	\$6,664	\$6,665	\$5,291	\$5,291	\$5,291	\$5,290

**RELEVANCE AND OUTCOMES/IMPACTS**

*Retrofit California* is designed to meet the DOE objective to fundamentally and permanently transform energy markets in a way that makes energy efficiency and renewable energy the options of first choice. This will be achieved by developing self-sustaining and transferable building retrofit program models that overcome three main market barriers (1) high first costs, (2) lack of information and property owner motivation, and (3) high transaction costs.

California has established the most aggressive climate and energy policy goals in the nation and the utility of the outcomes of *Retrofit California* is essential in order to meet the State's AB 32 Global Warming Solutions Act's 2009 Scoping Plan and the California Public Utilities Commission's (PUC) California Energy Efficiency Strategic Plan which call for massive and rapid energy usage reductions in essentially all buildings by 2020.

*Retrofit California* is designed to deliver tangible outcomes/impacts and benefit the following targeted constituencies:

- **Low- and Moderate-Income Communities:** Communities that participate in this program will benefit from reduced energy expenditures as well as a more comfortable and healthy built environment.
- **Construction Industry:** Construction industry businesses and workers will be given the opportunity to retool and retrain in order to take advantage of a tremendous demand for energy auditors, retrofitters, PV installers, and other positions.
- **California Businesses and Workers:** As property owners save money on their energy bills, they will be able to shift expenditures to other more employment-intensive industries. The combination of reduced energy costs and greater business may provide a crucial cushion to many California businesses struggling in the current economic climate. The expansion of the new green economy will also employ a wide variety of professionals including, contractors, sales people, and project managers.
- **California Rate-Payers:** Facilitating investments in building energy retrofits enables California rate payers to spend less on energy and simultaneously increase the value of their properties.
- **Local and State Government Agencies:** Provides government an effective tool to reach climate and energy goals while increasing local government revenue through increased permit and sales tax revenues.

**Sustainability**

*Retrofit California* is designed to meet DOE's objective that investments remain sustainable beyond the grant period. Retrofit Ramp-Up funds will determine the best scalable program approaches that overcome market barriers and will help build essential program infrastructure. Once financing tools, advanced outreach and marketing methods, and efficient delivery strategies have been proven, investment in energy efficiency programs can be scaled up using California public goods monies and market momentum can be leveraged to achieve state energy and GHG reduction goals.

**ROLES OF PARTICIPANTS**

Los Angeles County has established a diverse consortium of public and private entities representing the leading organizations and individuals involved in building energy retrofit programs both in California and the nation, as illustrated in Table 16. The governance structure, experience, and roles of major partners are described in the Consortium Structure and Capabilities section. Key project directors/managers' experience in performing and implementing similar programs is provided in attached resumes. Many of the entities below have already begun working together on energy efficiency and other efforts, allowing for the larger consortium to work collaboratively from day one.

**Table 16. Retrofit California Public/Private Partnership**

Government	NGOs & Academic Institutions	Private Companies	Utilities
Energy Commission	LBNL	Lowe's Home Improvement	PG&E
Air Resources Board	Stanford PEEC	Ace Hardware	SCE
Los Angeles County*	Dr. Wesley Schultz,	Recurve, Inc.	SoCalGas
ABAG*	CSU San Marcos	Beutler Corp.	SDG&E
SACOG	San Diego SU	Renewable Funding	SMUD*
SANDAG	CCSE*	BKI	
StopWaste.org	Build It Green	Enalaysis Corp.	
SCTA	The Energy Coalition		
San Francisco	Efficiency First		
San Jose	CBPCA		
Sacramento, City & County			
San Diego, City & County			
Chula Vista			

\*Regional Principal Investigators

**ARRA INFORMATION**

Retrofit California will create 6,561 jobs during the three year grant timeframe and has been designed to leverage approximately \$529 million in private capital, utility incentives, EECBG formula grants and SEP funds, thereby allowing Retrofit Ramp-Up dollars to have a greater impact in increasing employment and stimulating the economy. The Bureau of Labor Statistics reported that unemployment in California reached 12.5% in October 2009, making California the state with the fourth highest unemployment rate in the United States. Therefore, investment in *Retrofit California* not only will aid economic recovery by building a strong building retrofit industry and putting people back to work but due to the self-sustaining program design will continue to deliver results for decades.

By leveraging significant private investment through PACE and other financing tools, the California regions served by *Retrofit California* will be able to create more jobs per dollar of stimulus funding than other programs. Additionally, the program focuses on efficiency projects that have significant internal rates of return. Thus participants will experience considerable savings on their energy expenditures. These savings can spur downstream employment, as consumption shifts from

carbon-based energy, which has low employment intensity, to service industries and retail, which employ more workers. *Retrofit California* will provide marketing, financing and technical services to support the retrofitting 45,606 homes (single family or multifamily) and 5,890,000 square feet of commercial building space in focused geographic areas, resulting in the following:

- A minimum 20% energy reduction on average
- Creation of 6,561 jobs
- Reduction of annual purchased energy consumption by an aggregate 947,050 source BTUs and \$18,048,048
- Permanent reduction of 44,543 metric tons CO<sub>2</sub>e annually in greenhouse gas emissions

**Table 17. ARRA Assumptions**

Building Type	Average Retrofit Cost Per Unit	Utility Incentive Per Unit	Number of Units Retrofitted	Utility Incentives	Private Capital
Single Family	\$10,000	\$1,000	37,364	\$36,600,000	\$373,640,000
Multifamily	\$5,000	\$50	7,869	\$385,000	\$39,345,000
Comm'l (\$/sq. ft.)	\$2/sq. ft.	\$1/sq. ft.	4,200,000 sq. ft.	\$2,000,000	\$8,400,000
Small Comm'l (SAC only) \$/sq. ft.	\$1/sq. ft.	0	1,690,000 sq. ft.	\$0	\$1,690,000
<b>Total</b>				<b>\$38,985,000</b>	<b>\$423,075,000</b>

Total \$529 million in leveraged funds include EECBG and SEP funds as detailed in Table 4. Total number of jobs is calculated by adding *Retrofit California* budget of \$75 million to total leverage funds and dividing by 92,000 (DOE job conversion number).

**CONCLUSION**

The *Retrofit California* Team is confident that this proposal amply demonstrates our ability and intent to deliver programs that fundamentally and permanently transform energy markets in a way that make energy efficiency and renewable energy the options of first choice. Our approach is built on a solid foundation of public-private partnership, unmatched experience and expertise, and an unparalleled political will to address climate change in a profound and meaningful way. In doing so, we will generate almost \$18 million in annual energy savings, create or preserve 6,561 jobs, and contribute an economic impact of more than \$604 million. We look forward to collaborating with DOE to address these shared priorities.

**FORM SFEC-126:**  
**NOTIFICATION OF CONTRACT APPROVAL**  
(S.F. Campaign and Governmental Conduct Code § 1.126)

<b>City Elective Officer Information</b> <i>(Please print clearly.)</i>	
Name of City elective officer(s):	City elective office(s) held:
Members, SF Board of Supervisors	Members, SF Board of Supervisors
<b>Contractor Information</b> <i>(Please print clearly.)</i>	
Name of contractor: <b>ICF International (ICF Resources, L.L.C.)</b>	
<i>Please list the names of (1) members of the contractor's board of directors; (2) the contractor's chief executive officer, chief financial officer and chief operating officer; (3) any person who has an ownership of 20 percent or more in the contractor; (4) any subcontractor listed in the bid or contract; and (5) any political committee sponsored or controlled by the contractor. Use additional pages as necessary.</i> See attached for (1), (2), and (4)\ (3) NA (5) NA	
Contractor address: 620 Folsom St., Suite 200, San Francisco, CA	
Date that contract was approved:	Amount of contract: \$546,322
Describe the nature of the contract that was approved: ICF and its sub-contractors will provide support for Dept of Environment's (DOE) energy efficiency, renewable energy, and climate initiative programs. Approximately two-thirds, or \$12,500,000, will be distributed to the public as program rebates that pay directly for energy-saving upgrades to residential and commercial property in the city. The remaining \$6,500,000 will pay for professional services in program design, processing applications and checks, quality control, inspections, database development, and data tracking. In addition, ICF and its subcontractors will provide professional services on an as-needed basis for training, research and development, regulation and policy, climate inventory certification, resource mapping, engineering analysis and other technical assistance as necessary.	
Comments: Since 2001 DOE has been receiving increased funding through State, Federal and Foundation grants. The broad scope of this contract enables the Department to apply for new funding opportunities with full knowledge that we can undertake innovative projects and fully comply with the terms and timeline set by the funders.	

This contract was approved by (check applicable):

- the City elective officer(s) identified on this form (Mayor, Gavin Newsom)
- a board on which the City elective officer(s) serves San Francisco Board of Supervisors  
Print Name of Board
- the board of a state agency (Health Authority, Housing Authority Commission, Industrial Development Authority Board, Parking Authority, Redevelopment Agency Commission, Relocation Appeals Board, Treasure Island Development Authority) on which an appointee of the City elective officer(s) identified on this form sits  
Print Name of Board

<b>Filer Information</b> <i>(Please print clearly.)</i>	
Name of filer: Clerk of the San Francisco Board of Supervisors	Contact telephone number: (415) 554-5184
Address: City Hall, Room 244, 1 Dr. Carlton B. Goodlett Pl, San Francisco, CA 94102	E-mail: bos.legislation@sfgov.org

Signature of City Elective Officer (if submitted by City elective officer)

Date Signed

Signature of Board Secretary or Clerk (if submitted by Board Secretary or Clerk)

Date Signed

**Form 126 Attachment**

**File # 101010**

**ICF International (ICF Resources, L.L.D.)**

**(a)**

**BOARD OF DIRECTORS**

**Eileen Auen**

Chairman and CEO

PMSI

**Dr. Edward H. Bersoff**

Chairman and CEO

ATS Corporation

**Dr. Srikant M. Datar**

Senior Associate Dean

Harvard Business School

**Richard M. Feldt**

President and CEO

Evergreen Solar, Inc.

**Joel R. Jacks**

Managing Partner

CM Equity Partners

**Sudhakar Kesavan**

Chairman

ICF International

**David C. Lucien**

Founder

DCL Associates

**Peter M. Schulte**

Managing Partner

CM Equity Partners

**(b)**

**Sudhakar Kesavan**

**Chairman & Chief Executive Officer**

**John Wasson**

**Executive Vice President - Chief Operating Officer**

**Ronald Vargo**

**Chief Financial Officer**

**(d)**

Stantec

Sustainable Design Resources

Jungle Communications, Inc

Enovity, Inc

Construction Management West

Simon & Associates

Urban Solutions