

Design for Comfort: Efficient Affordable Housing

1. Projected Program Budget	\$	588,882
2. Projected Program Impacts		
MWh		234
MW (Summer Peak)		0.45
3. Program Cost Effectiveness		
TRC		0.93
PAC		0.81

4. Program Descriptors

Market Sector: Residential
Program Classification: Statewide
Program Status: New

5. Program Statement

Designed for Comfort: Efficient Affordable Housing (referred to as DfC hereafter) is a resource acquisition program that addresses the multifamily affordable housing retrofit market segment. The program uses a performance-based approach to encourage affordable housing property owners to choose the most cost-effective measures to achieve a 20% energy improvement over existing building conditions. Because of the substantial interest in the previous program years, HMG seeks to continue the program offering and expand the range of services available. The program aims to transform the multifamily retrofit market away from a prescriptive, one-size-fits-all approach, toward a comprehensive building analysis approach that uses energy consultants and HERS Raters to evaluate a wide palette of energy efficiency options when rehabilitating multifamily properties. The program will provide training to owners and property managers on the effective use of this performance-based approach and train tenants on the proper use of their upgraded apartments. The program will capture opportunities related to behavioral changes that would otherwise be lost, and will also capture some lighting energy savings that the residential Title 24 standards would not.

6. Program Rationale

The primary target of the program is affordable and supportive housing owners. They and their tenants (the ultimate beneficiaries) meet several of the CPUC criteria for hard-to-reach ratepayer categories: affordable multifamily owners, supportive housing owners, income-qualified tenants/renters, and those with special needs. The supportive housing market consists of housing for tenants with special needs, such as young adults transitioning out of foster care. This hard-to-reach market has typically not been allowed to benefit from previous energy efficiency programs because these older buildings are master-metered for electricity. Past attempts to achieve energy efficiency through LIHEAP programs have been focused on “weatherization” types of measures.

7. Program Outcomes

The DfC program provides long-term energy benefits by promoting a performance based, comprehensive, cost-effective package of energy efficient measures with long useful lives (typically 16 to 20 years). These include high performance windows, better insulation, high-efficiency heating, cooling, and water heating equipment, and most likely, a combination of these measures to achieve maximum savings potential.

The following table provides the unit goals of the program. The categories of “units” include three targeted housing types: large affordable multifamily (240 units), small affordable housing (50 units), supportive housing projects (50 units), energy consultants (450 units), HERS Raters (450 units), and EnergySmart Paks (450 units). A majority of the unit and energy savings goals will occur in the second year to allow time for project recruitment, audit, analysis, rehabilitation construction, and HERS verification.

Goals 2006-2008				
Unit Type	2006	2007	2008	Total
MF Units Large 9+ units (Rehab)	80	160		240
MF Units Small 3-8 units (Rehab)	15	35		50
Supportive Housing	15	35		50
Energy Consultant	150	300		450
HERS Raters	150	300		450
EnergySmart Paks	200	250		450

8. Program Strategy

To overcome a wide array of regulatory, market, and financial barriers, the program provides incentives toward the cost of rehabilitating existing affordable and special needs housing projects. The incentives partially offset costs to install or replace measures needed to achieve a 20% reduction in energy use. Energy savings for each project will be calculated using an approved program (e.g., MICROPAS) and installation will be verified by a HERS rater before payment of incentives to a property owner.

Furthermore, even when eligible, the affordable and supportive housing market has mostly been unresponsive to energy efficiency programs due to lack of awareness, lack of funds, actual or perceived regulatory barriers, and a perception that efficiency costs too much. Additional and consistent attention is warranted to overcome the persistent attitude that “affordable” means “cheap.” DfC focuses on older affordable housing projects already in need of rehabilitation in order to leverage funds that may already be allocated for improvements. The program will also provide incentives for energy consultants and HERS raters to increase their expertise and presence in this hard-to-reach market. Without DfC, the typical rehab project would implement entirely cosmetic or structural improvements - without even considering energy efficiency. Typical affordable housing properties are rehabilitated no more frequently than every 10-15 years and it is only at these time that major changes to the building envelope are feasible. If Designed for Comfort did not assist on these projects, they would represent a huge lost opportunity.

9. Program Objectives

While a person earning the median income in the Southern California Edison area pays about 5% of monthly household income on utility expenses, affordable-qualified tenants (typically earning less than 75% of median area income) spend approximately 20% of their income on utilities. With natural gas prices expected to increase by more than 50%

this winter, utilities will be an even higher percentage than now. This market segment needs the energy cost savings more than any other. DfC will reduce the second largest component of their housing burden and free up resources for other necessities, such as clothes, medication or childcare.

Below are energy savings estimates related to the unit goals indicated in Section 7 (Above).

	Net Jul-Sept kW (On Peak)	Net Annual NCP (kW)	Net CEC (kW)	Annual Net kWh	Lifecycle Net kWh
2006	130	130	15	68,967	1,283,454
2007	313	314	36	165,171	3,111,646
Total	443	443	51	234,138	4,395,100

10. Program Implementation

Task 1 – Re-assess Implementation Timeline, Marketing Plan, and Staffing Rates or Unit Pricing with SCE for Inclusion in the Purchase Order

HMG will provide a revised Contractor’s Scope of Work, Implementation Timeline, Marketing Plan, Staffing Rates or Unit Pricing Schedule and all other requested documents and revised contract language to reflect negotiated changes within 10 business days of notification of contract award.

Task 2a – Assemble and Submit SCE Approved Purchase Order Kit

HMG will prepare the all documents for the Purchase Order Documentation Kit for use by SCE.

Task 3 – Build Tracking System

HMG has a substantial infrastructure of data collection, project tracking, and program reporting tools at its disposal. These were developed by HMG for use with the current programs HMG administers: Designed for Comfort and SCE’s portion of the California ENERGY STAR New Homes Multifamily program.

Task 4 – Develop Marketing Materials and Obtain Approval from SCE

Working from the existing marketing materials for DfC, HMG will subcontract to Pat Davis Design Group (PDDG) for graphic design and print management services. PDDG will provide graphic design consulting as we update these templates They include a case study, a brochure detailing the program benefits, and a one-pager discussing the HERS Rating process.

Task 5 – Implement Marketing Campaign

Figure 1 lists a variety of strategies that will be used to reach the target audience. Attending affordable housing conferences is paramount to the success of the recruitment efforts.

Figure 1:

Marketing Strategy/Task	Deliverable	Deliverable Due Date
Create Marketing Materials	1) Program brochure 2) Program application 3) Web site 4) html email blast template	Within 60 days of contract execution
Conferences include, but are not limited to Southern California Association of Non-profit Housing (SCANPH), Affordable Housing Management Association, Kennedy Commission Conference, Enterprise Foundation, California Redevelopment Association Conference, California Housing Consortium, Housing California, California Council of Affordable Housing, and California Association of Local Housing Finance Agencies.	1) Monthly reports of marketing activity 2) Presentations and agendas 3) Exhibit and program artwork and copy	1) Ongoing 2) Varies 3) as needed to meet conference deadlines
Outreach to target market existing lists (waitlist and existing lists)	1) Monthly reports of marketing and outreach activity	Ongoing
Distribute EnergySmart Paks (how many?)	1) Tracking of target market recipients of EnergySmart Paks	Ongoing
Articles in Industry Publications (how many?)	1) Monthly reports and copies of articles placed in industry and trade publications	Ongoing

Task 6 – Enroll Customers

6a. Recruitment

HMG will recruit owners and meet with them to discuss their projects and how they may qualify for DfC. Upon understanding the owner’s funding situation, rehabilitation needs, and commitment to improving energy efficiency, HMG will invite the owners to complete an application and begin the program process.

6b. Review Applications

Applicants will submit an application form similar in format to the forms used with Designed for Comfort during the 2002-2005 program years. The application form acts as a commitment on both the part of HMG and the owner-developer. It will also allow us to estimate the incentive amount and allow for cross-checks to prevent double-dipping. At this point, the project will be considered “in queue.

To qualify for the program incentives, a project must have documentation of existing conditions, modeling of the building using approved software, identified upgrade measures resulting in a reduction of building energy use of at least 20%, a commitment to implement the necessary measures, and third party verification that the measures were installed. An alternate way for a project to qualify is to meet the 2005 Title 24 Energy Standards, including the lighting measures. This alternative is deemed to be far in excess of a 20 percent improvement over existing conditions for older buildings.

6c. Initial HERS Rating/Audit

A California Home Energy Rating Systems (C-HERS) rating and audit will be conducted

on each building to establish the existing conditions of a potential rehab project. The owner will contract with a certified C-HERS Rater to perform the initial audit and rating. The Rater will submit documentation of the existing conditions to DfC program staff. The HERS Rater may also perform the services of an Energy Consultant (see “Title 24 Compliance Run” below). If not, then the HERS Rater submits the building existing conditions to the Energy Consultant, or authorizes DfC to do this on the owner’s behalf.

6d. Title 24 Compliance Run

The owner will contract with an Energy Consultant to develop a baseline and proposed whole building simulation model.

6e. Measure Selection

HMG will play a significant role in moving each project through the pipeline. DfC program staff will meet with owner in person or by conference call to discuss merits of the energy efficiency upgrade options. The meeting will usually include the Energy Consultant and other project stakeholders. Additional research may be required to answer questions or address concerns with new technologies or solutions. Generally, there will be no specific deliverable from this interaction other than a record of the meeting and its outcome.

6f. Contractor Selection

At this point, the owner will typically have selected a contractor or invited a contractor to provide price quotes for the upgrade options presented by the Energy Consultant. DfC staff plays no role in this selection process other than to make sure the participant has selected someone and is moving forward.

DfC will verify that the owner would like to go forward with a specific list of project upgrades. When DfC staff receives a signed application, the project is considered “committed,” and we will request SCE to commit funds for the owner’s participation in the program.

Task 7 – Install Energy Efficient Hardware, Issue Customer Rebates, and/or Perform Program Services

DfC is not a direct install program, and has no direct relationship with any parties installing hardware.

7a. Install Upgrades

The owner needs assurance that once the rehabilitation construction begins, incentive funds will be available on a timely basis. HMG will work with the owner to ensure that the project construction is scheduled within the timeframe of the funding cycle, and to assist along the way. If the construction timeline is over an extended period of time, DfC staff will ask the owner or contractor to submit a detailed work plan. Otherwise, start of construction, as witnessed by the HERS rater, will serve as evidence that work is progressing and the participant is moving steadily through the program process.

7b. HERS Inspection/Rating

The HERS rater may, depending upon the choice of measures, perform an inspection during the construction period. Upon completion of the rehab project, a HERS rater will conduct a final inspection to ensure that the recommended equipment is actually installed. The HERS Rater will submit documentation to DfC staff certifying that the as built, upgraded conditions match the simulation performance parameters.

7c. Prepare Incentive Request

Upon receipt of the final HERS verification certificate, HMG staff will prepare a rebate request form and submit it to the owner for a signature.

7d. Owner/Tenant Training and EnergySmart Pak Distribution

Sometime during the construction, or shortly after, HMGE will offer a seminar for owner's staff and tenants of the property. These events may be scheduled during evening hours with food and drink to attract the greatest number of tenants. During the presentation, the upgrades will be presented and energy efficient use of the building will be discussed. On-site maintenance staff will also have an opportunity to walk the site with DfC staff to ask any questions regarding the proper long-term maintenance of the new equipment. DfC staff will also deliver a one EnergySmart Pak for each dwelling unit at the property.

Task 8 – Inspect Installed Jobs

8a Quality Control/Inspection

Quality control by way of the C-HERS verification process is an integral part of the DfC implementation structure. In addition to requiring a HERS inspection for each participating project, HMG will inspect 10% of participating projects using in house HERS-certified raters. If a deficient verification is discovered, HMG staff will work directly with the HERS rater to remedy the situation. In rare cases, if a rater refuses to cooperate or demonstrates a lack of sufficient knowledge to perform the HERS Rating process, a complaint may be filed with the certifying HERS Provider.

8b Customer Complaint Process

In the event of a complaint from a project owner, a HERS rater, or a tenant, HMG will work diligently with the parties to resolve the issue. Owner-developer questions and complaints will be addressed in a timely manner. Questions will be addressed as soon as possible. When an immediate response is not possible, DfC will send an acknowledgement of receipt of the complaint within 3 business days.

Task 9 – Remedy Installation Issues

If there is a problem with a specific project (e.g., whereby it does not pass the final HERS inspection) HMG will work with the HERS rater, installing contractor, and property owner to identify a remedy for the deficiency within five business days. HMG will notify the owner of the property of any deficiencies and, at the property owner's request, will assist him/her in conveying appropriate information to the installing contractor. We will inform the owner that rebate funds will be withheld until the deficiency is remedied.

Re-inspect Corrected Jobs

Once an installation problem is remedied, HMG will work with the HERS rater to verify that the problem is resolved. In any case where such an issue arises, C-HERS certified staff at HMG will personally re-inspect the deficient dwellings before the upgrade incentive is paid.

Task 10 – Perform Customer Satisfaction Surveys

Customer satisfaction surveys will be provided to each property owner at the completion of project upgrades. The survey will identify whether HMG and the DfC program are meeting customer expectations and representing the best interests of SCE through its CPUC-directed energy efficiency programs. The survey will evaluate how HMG provided DfC services, if all applicable and available energy efficiency programs were identified, and if program marketing and participation guidelines, HERS Rater process and Energy Consulting services met the owner's expectations.

Task 11 – Address Customer Satisfaction Issues

If survey responses indicate a customer is unsatisfied with services from DfC, HMG will make every attempt to resolve the issue immediately. If the customer's dissatisfaction is with the contractor with whom the customer contracted, HMG will make sure that the contractor is aware of the issue and will attempt to get a commitment for the contractor to resolve the issue, HMG will address any dissatisfaction issues in a timely manner.

Task 12 – Invoice SCE for Completed Jobs

Task 13 – Perform Program Reporting

HMG will: a) Submit Program Workbook on a monthly basis, b) Submit a Program Narrative on a monthly basis, c) Submit Flat File data reports on a monthly basis (or other times requested), and d) Perform Ad Hoc Reporting as requested by SCE program manager or EM&V contractor.

Task 14 – Program Ramp Down

As with the current funding cycle, HMG will work with participating property owners near the end of the program funding cycle to ensure they complete construction and hardware installation on participating projects, to ensure they obtain final HERS verifications, and to process incentive payments within the funding cycle. HMG proposes to front-load the program outreach and marketing; target a majority of the project activity (including HERS verifications) to occur near the middle of the program, and taper activities off in the final months of the program.

HMG will provide a program ramp-down plan within 60 days of contract execution.

Task 15 – Shut Down the Program

All hardware and other measures should be installed by November 31, 2007, HERS inspections completed by December 31, 2007, and payments processed (checks sent) by January 31, 2008.

Task 16 – Respond to Miscellaneous Utility/CPUC Data Requests

Task 17 – Follow Up with Remaining and New Customer Issues

If a customer satisfaction issue is not fully resolved before the program is shut down, HMG will work with the property owner, the energy consultant, the HERS rater, and the installer to continue to diligently address the issue.

Task 18 – Submit Final Program Report

HMG will provide a final report that includes a summary of achievements, issues, lessons learned, and other important topics from the monthly reports.

11. Customer Description

Three types of customers are targeted for this program: housing authorities, owners of multifamily affordable housing projects and owners of supportive housing projects. At least 10% of the units in participant affordable housing (generally closer to 90%) will be occupied by tenants identified as “affordable qualified” (e.g., Section 8 voucher recipients, individuals with SSI as their primary income). Most of the tenants in supportive housing (e.g., young adults transitioning out of foster care, single mothers escaping abusive situations, emotionally or physically handicapped) also fit the definition of income-qualified.

12. Customer Interface: Please See Task 6 (Above)

13. Energy Measures and Program Activities:

13.1. Measures Information: Please see Section 7 (Above) and 13.2 (Below)

13.2. Energy Savings and Demand Reduction Level Data:

Net Impacts by Measure							
	Net Avg Jul-Sep (kW)	Net Dec-Feb Pk (kW)	Net CEC (kW)	Net User Entered kW	Annual kWh adj for Net to gross	Lifecycle kWh (Annual * Measure Life)	
Total or Average	449.17	62.71	50.81	449.17	234,138	4,405,561	
Multifamily Rehab (20% Improvement) Large CZ 8	62.64	5.70	4.04	63	18,630	372,592	
Multifamily Rehab (20% Improvement) Large CZ 1	41.76	3.80	5.62	42	25,877	517,546	
Multifamily Rehab (20% Improvement) Large CZ 1	61.44	5.59	6.68	61	30,797	615,936	
Multifamily Rehab (20% Improvement) Large CZ 1	138.24	12.58	14.98	138	69,043	1,380,864	
Multifamily Rehab (20% Improvement) Small CZ 8	25.92	2.36	1.67	26	7,709	154,176	
Multifamily Rehab (20% Improvement) Small CZ 8	17.28	1.57	2.32	17	10,708	214,157	
Multifamily Rehab (20% Improvement) Small CZ 1	12.16	1.11	1.32	12	6,095	121,904	
Multifamily Rehab (20% Improvement) Small CZ 1	27.36	2.49	2.97	27	13,665	273,296	
Supportive Housing Rehab (20% Improvement) L	17.29	1.57	1.12	17	5,142	102,835	
Supportive Housing Rehab (20% Improvement) C	11.53	1.05	1.55	12	7,142	142,843	
Supportive Housing Rehab (20% Improvement) C	8.11	0.74	0.88	8	4,065	81,310	
Supportive Housing (20% Improvement) CZ 14, 1	18.25	1.66	1.98	18	9,114	182,288	
EnergySmart Paks	7.20	22.49	5.67	7	26,150	245,814	
Energy Consultants	-	-	-	-	-	-	
HERS Raters	-	-	-	-	-	-	

13.3. Non-energy Activities (Audits, Trainings, etc.): Please see Task 7d (Above)

13.4. Subcontractor Activities

Pat Davis Design Group

Existing generic marketing materials can be used to immediately initiate program marketing. Pat Davis Design Group (PDDG) will help to update and reprint program collateral materials including brochures, Web site, exhibit display, and EnergySmart Pak inserts and covers. The design firm may also design collateral materials including, but not limited to:

- A template advertisement to be placed in conference programs and other venues to advertise the program.

- An “advertorial” that showcases case studies
- A template for participating project case studies
- Other collateral material as needed

PDDG provided graphic design work for the launch of the statewide non-residential program, Savings By Design, as well as every iteration of Designed for Comfort. Pat Davis has worked with PG&E and SDG&E on brochures and other graphics for several of their programs.

EnergySmart Pak vendor: Resource Action Program

HMG proposes to continue delivering the EnergySmart Paks to program participants, tenants and key market actors. HMG proposes to use Resource Action Program as the vendor to compile and ship these EnergySmart Paks.

13.5. Quality Assurance and Evaluation Activities: Please see Task 8 (Above)

13.6. Marketing Activities: Please see Task 5 (Above)