

PRESERVATION AS PART OF A SUSTAINABLE STRATEGY

MARK HUCK, AIA, LEED AP

CALIFORNIA OFFICE OF HISTORIC PRESERVATION

SACRAMENTO PRESERVATION COMMISSION

Sacramento, California

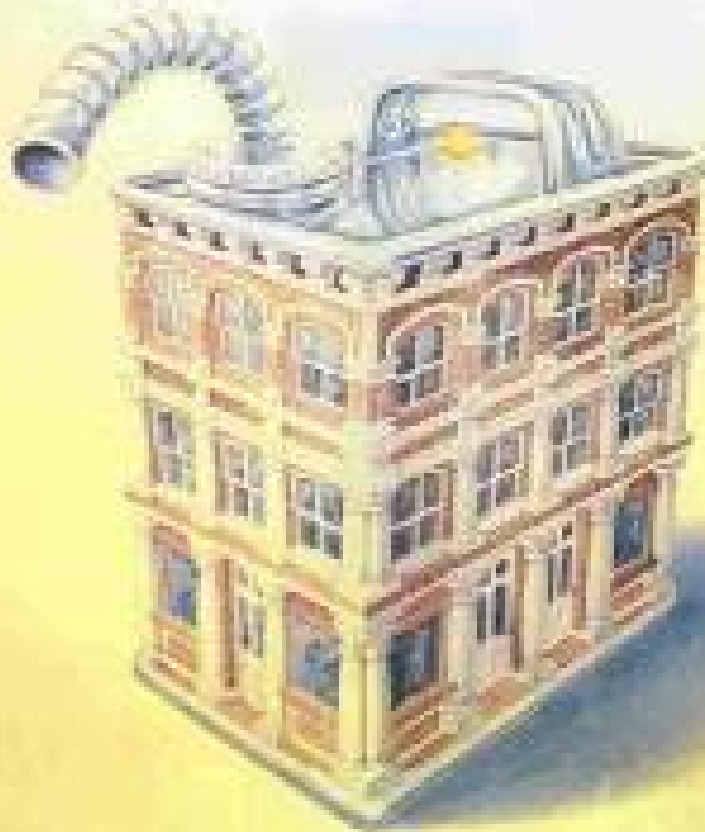
April 1, 2009



PRESERVATION

Reusing America's Energy

Preservation Week May 11-17, 1980



It takes energy to construct a new building.
It saves energy to preserve an old one.

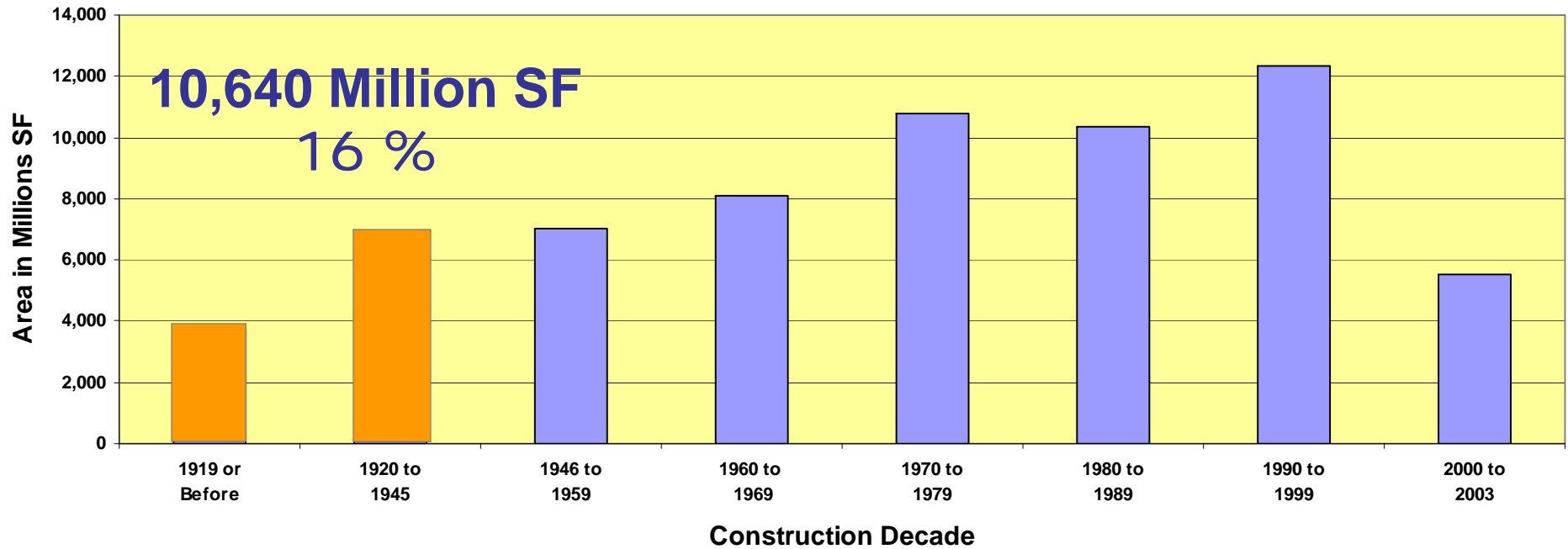
NTHP Preservation Week 1980 poster

THE NATIONAL TRUST FOR HISTORIC PRESERVATION
1100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, D.C. 20004
TELEPHONE: (202) 638-1000

WHY HISTORIC & EXISTING BUILDINGS ARE IMPORTANT

Historic Buildings

AREA: Non-Residential Buildings

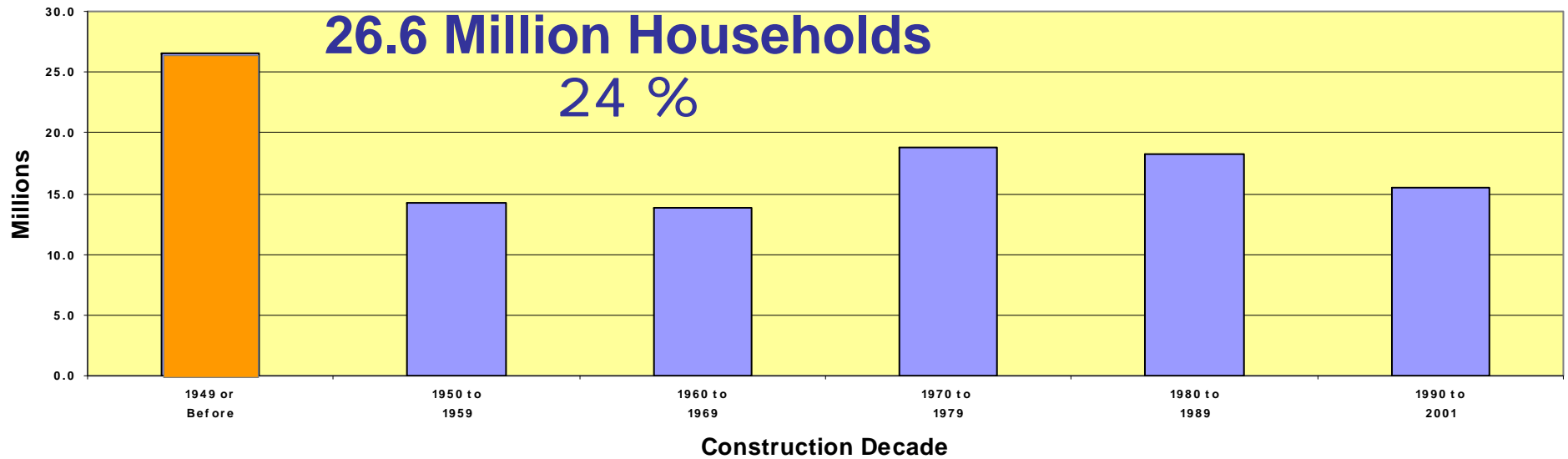


Commercial Building Inventory
Department of Energy

WHY HISTORIC & EXISTING BUILDINGS ARE IMPORTANT

Historic Buildings

AREA: Residential Buildings



Residential Building Inventory
Department of Energy

WHY HISTORIC & EXISTING BUILDINGS ARE IMPORTANT

Source: Commercial Building Energy Consumption Survey, 2003

<http://www.eia.doe.gov/emeu/cbecs>

Average energy consumption Btu/sq. ft Commercial Buildings (non malls)

Before 1920	80,127
1920 – 1945	90,234
1946 – 1959	80,198
1960 – 1969	90,976
1970 – 1979	94,968
1980 – 1989	100,077
1990 – 1999	88,834
2000 – 2003	79,703

PERCEIVED ENERGY INEFFICIENCY

WHY HISTORIC & EXISTING BUILDINGS ARE IMPORTANT

Source: Total Energy Consumption in US Households by Year of Construction
<http://www.eia.doe.gov/emeu>

Average annual energy consumption units/Household

Decade built	kWh	kcf (gas)
Before 1949	8,332	82
1950 – 1959	9,533	71
1960 – 1969	9,586	63
1970 – 1979	11,971	61
1980 – 1989	12,534	63
1990 – 2001	10,656	70

**PERCEIVED ENERGY
INEFFICIENCY**

OPTIONS for
ENERGY EFFICIENCY
in EXISTING BUILDINGS



COMMISSION REPORT

December 2005
CEC-400-2005-039-CMF

Arnold Schwarzenegger
Governor

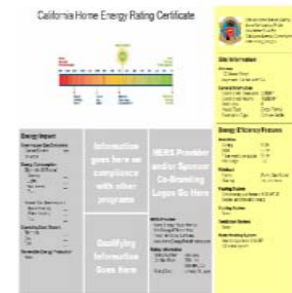


OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS

5 RESIDENTIAL STRATEGIES

- Time of Sale Information Disclosure by 2010
 - Includes Home Energy Ratings System score
- Information Gateway
 - Utility efficiency information clearinghouses that
 - inform homeowners of energy efficiency actions, programs and services
 - Targets high peak demand and high energy-use homes
 - Facilitates residential benchmarking
- Integrated Whole Building Diagnostic Testing and Repair
 - Finds and corrects flaws in construction or operation
 - Increases energy efficiency and health and comfort
- Assistance to Affordable Housing
 - Triggered at rehabilitation and equipment replacement
- Equipment Tune-Ups
 - Increased frequency and effectiveness of HVAC system tune-ups

HERS II



OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS

Figure ES-1

Cumulative Energy Savings of California Standards and Energy Efficiency Program:

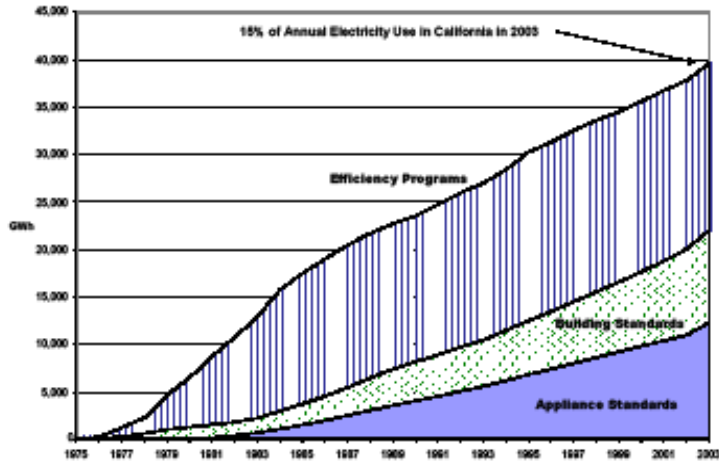


Figure ES-2

Total Electricity Use, per capita, 1960 - 2001

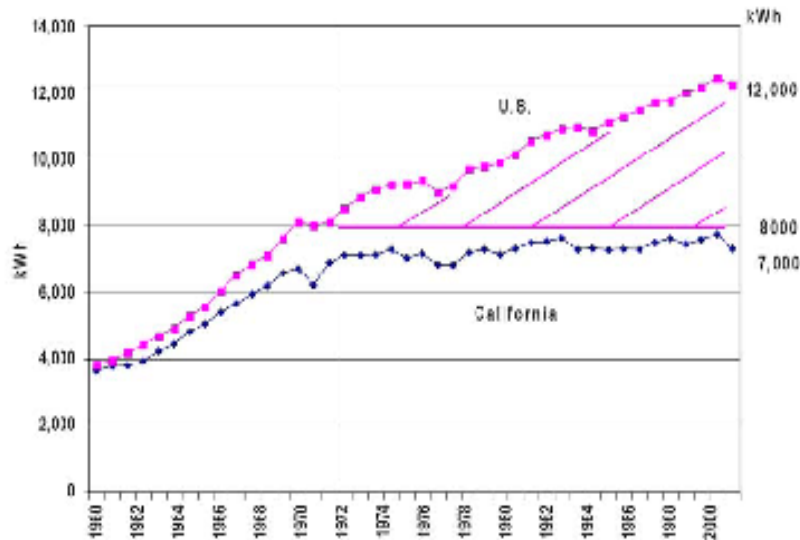


Figure 2-1

Annual Spending by PG&E, SCE, and SDG&E For Energy Efficiency Programs

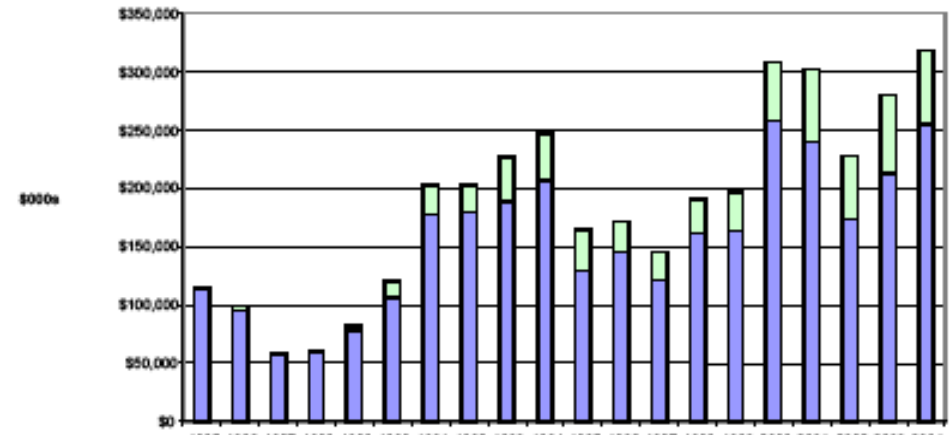
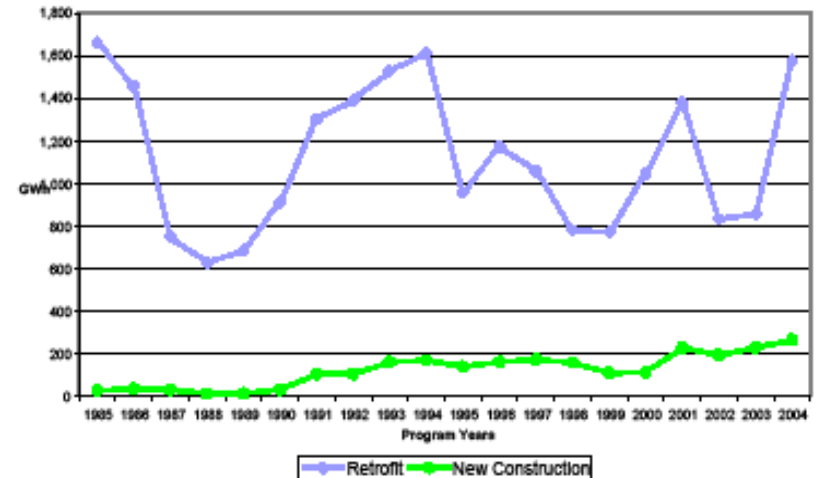


Figure 2-2

First Year Savings for Retrofit and New Construction Sectors for PY 1985-2004



OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS

Table 3-2

Comparison of Newer and Older Dwellings

	Newer Dwellings (Built after 1996)	Older Dwellings	Percent Difference
Annual Electric Household Consumption (kWh)	7,159	5,980	20
Annual Gas Household Consumption (therms)	468	459	2
Dwelling Size (square feet)	2,039	1,434	42
Number of Residents	3.11	2.83	7
Average Annual Income	\$86,276	\$58,082	49
Percent Single Family	74%	58%	28
Owner Occupied	83%	82%	35
Saturation of Central AC	78%	41%	93
Cooling Degree Days	962	900	7
Cooling Degree Days (those with central AC)	1,119	1,279	-13
Programmable Cooling Thermostat	85%	47%	83
Swimming Pool Saturation	13%	8%	59
Average Number of Computers per Home	1.21	0.93	30
Natural Gas Primary Heating	86%	83%	5
Heating Degree Days	2,050	2,023	1
Exterior Wall Insulation Throughout	91%	51%	77
Attic Insulation	91%	66%	38
Double Pane Windows Throughout	78%	31%	157
Low Flow Showerheads Throughout	71%	54%	32
Average Number of CFLs per Home	2.29	1.74	32
Horizontal Axis Washers	13%	9%	43

Source: California Statewide Residential Appliance Saturation Study Final Report, Executive Summary, June 2004, publication no. 400-004-009.

OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS

TIME OF SALE DISCLOSURE

Table B-2

Information at Time-of-Sale Disclosure Energy Savings

Phase	Pilot	Phase 1	Phase 2
Homes targeted	358,000	358,000	552,000
Program adoption rates (probable to high)	.10 - .15	.85 - .90	.85 - .90
Number of participants	35,800 - 53,400	302,800 - 320,400	489,200 - 498,800
Savings per home	543 kWh/yr 0.16 kW 31 therm/yr	543 kWh/yr 0.16 kW 31 therm/yr	535 kWh/yr 0.15 kW 26 therm/yr
Gigawatt hours	19 - 29	164 - 174	251 - 268
Megawatts	6 - 9	49 - 52	73 - 77
Million therms	1.1 - 1.5	9.3 - 9.9	12.0 - 12.7

Program costs and cost-effectiveness at probable and high adoption rates during each phase of the program are shown in Table B-3 below.

Table B-3

Time-of-Sale Information Disclosure Cost and Cost-Effectiveness

	Costs (\$million) and Benefit/Cost Ratio					
	Pilot		Phase 1		Phase 2	
	Probable adoption	High adoption	Probable adoption	High adoption	Probable adoption	High adoption
Program Admin Cost	\$2.8	\$3.9	\$15.1	\$16.0	\$13.8	\$14.8
Participant Incentive Cost	\$1.1	\$1.7	\$0.0	\$0.0	\$0.0	\$0.0
Total Program Cost	\$3.7	\$5.6	\$15.1	\$16.0	\$13.8	\$14.8
Participant Benefits	\$50.8	\$76.2	\$432.0	\$457.4	\$618.3	\$654.7
Participant Costs	\$24.6	\$38.9	\$218.0	\$230.8	\$311.7	\$330.0
Participant Benefit/Cost Ratio	2.1	2.1	2.0	2.0	2.0	2.0
Total Resource Benefits	\$27.8	\$41.7	\$238.2	\$250.1	\$335.1	\$354.8
Total Resource Costs	\$28.2	\$42.4	\$233.1	\$246.9	\$325.5	\$344.7
Total Resource Benefit/Cost Ratio	1.0	1.0	1.0	1.0	1.0	1.0

Table B-1

Time-of-Sale Information Disclosure Measure Adoption Rates

Measure category	Measure description	Adoption rate
Building Shell	Low-e window replacement	0.11
	Ceiling Insulation	0.33
	Wall Insulation	0.2
	Infiltration Reduction	0.73
HVAC	High efficiency central AC	0.48
	Programmable Thermostat	0.53
	HVAC Diagnostic Testing And Repair	0.48
	Duct Repair	0.44
	Condensing Furnace	0.44
	High efficiency room air conditioner	0.48
Lighting	CFLs	0.63
	Interior fluorescent lighting	0.39
Appliances	ENERGY STAR Refrigerator	0.31
	High efficiency freezer	0.31
	ENERGY STAR clothes washer	0.1
	ENERGY STAR dishwasher	0.25
Water Heating	High efficiency water heater	0.19
	Low flow showerhead	0.17
	Pipe wrap	0.64
	Faucet aerators	0.8

OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS INFORMATION GATEWAY

Table B-4

Information Gateway Measure Adoption Rates

End-Use	Measures Included	Measure Adoption ratio
	Ceiling insulation Floor insulation Infiltration reduction Wall insulation	0.58
HVAC	High efficiency central air conditioner High efficiency room air conditioner Programmable thermostat HVAC diagnostic testing and repair Duct repair Condensing furnace	0.58
Lighting	CFLs, interior fluorescent lighting	0.63
Appliances	ENERGY STAR refrigerator ENERGY STAR freezer ENERGY STAR clothes washer ENERGY STAR dishwasher	0.40



Table B-5

Information Gateway Energy Savings

Homes targeted	624,000
Program adoption rates (probable to high)	0.19 – 0.80
Number of participants	118,600 – 499,200
Savings per home	619 kWh/yr 0.16 kW 56 therm/yr
Gigawatt hours	73 - 307
Megawatts	19 - 89
Million therms	6.6 – 27.8

Table B-6

Information Gateway Cost and Cost-Effectiveness

	Costs (\$million) and Benefit/Cost Ratio	
	Probable adoption	High adoption
Program Administrative Cost	\$28.0	\$117.9
Participant Incentive Cost	\$0.0	\$0.0
Total Program Cost	\$28.0	\$117.9
Participant Benefits	\$243.6	\$1,025.8
Participant Costs	\$127.0	\$534.7
Participant Benefit/Cost Ratio	1.9	1.9
Total Resource Benefits	\$122.1	\$514.3
Total Resource Costs	\$117.5	\$494.7
Total Resource Benefit/Cost Ratio	1.0	1.0

OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS INTEGRATED WHOLE BUILDING TESTING AND REPAIR



Table 5-5

Action Plan for Integrated Whole Building Diagnostic Testing and Repair

Activity	Lead Organization/Support Organizations	Timeframe
Review evaluation and technical reports, conduct assessment and further refine potential savings	Energy Commission	2006
Conduct program market demand and participation analysis	Energy Commission/Market research firm	2006-2007
Develop program design and funding requirements	Energy Commission	2007
Conduct strategy go/no-go decision criteria and make decision based on criteria and available funding.	Energy Commission	2007
Design program development and implementation strategies consistent with funding	Energy Commission	2007
Review and revise technical training approach	Energy Commission/ California Building Performance Contractors Association (CBPCA).	2007
Investigate valuation of non-energy benefits	CPUC	2007
Engage insurance industry	Energy Commission	2007
Design targeting and marketing approach	Energy Commission/Marketing expert	2008
Train contractors in target area	CBPCA	2008
Market and roll-out program in target area	Energy Commission with Flex-Your-Power and other outreach efforts	2008
Evaluate program and modify to improve, continue or eliminate	Evaluation Firm	2008 - 2009

Table B-9

Integrated Whole Building Diagnostic Testing and Repair Energy Savings

Homes targeted	272,000
Program adoption rates (probable to high)	0.10 - 0.12
Number of participants	27,000 - 33,000
Savings per home	1,850 kWh/yr 1.5 kW 68 therm/yr
Gigawatt hours	45 - 54
Megawatts	40 - 48
Million therms	1.9 - 2.2

Table B-10

Residential Integrated Whole Building Diagnostic Testing and Repair Cost and Effectiveness

	Costs (\$million) and Benefit/Cost Ratio	
	Probable adoption	High adoption
Program Admin Cost	\$5.0	\$6.1
Participant Incentive Cost	\$8.8	\$8.2
Total Program Cost	\$11.9	\$14.3
Participant Benefits	\$112.3	\$134.7
Participant Costs	\$68.1	\$81.7
Participant Benefit/Cost Ratio	1.7	1.7
Total Resource Benefits	\$79.8	\$95.8
Total Resource Costs	\$73.2	\$87.8
Total Resource Benefit/Cost Ratio	1.1	1.1

OPTIONS FOR ENERGY EFFICIENCY IN EXISTING BUILDINGS

RESIDENTIAL EQUIPMENT TUNE-UP

Table B-7

Residential Equipment Tune-up Energy Savings

Resale or replacement events	532,000
Homes requiring a tune-up	67,000
Program adoption rates (probable to high)	0.48 – 0.57
Number of participants	48,800 – 55,200
Savings per home	328 kWh/yr 0.42 kW 74 therm/yr
Gigawatt hours	15 - 18
Megawatts	20 - 24
Million therms	3.8 - 4.4

Table B-8

Residential Equipment Tune-Ups and O&M Services Cost and Cost-Effectiveness

	Costs (\$million) and Benefit/Cost Ratio	
	Probable adoption	High adoption
Program Admin Cost	\$4.7	\$5.6
Participant Incentive Cost	\$0.0	\$0.0
Total Program Cost	\$4.7	\$5.6
Participant Benefits	\$74.8	\$89.8
Participant Costs	\$35.6	\$42.7
Participant Benefit/Cost Ratio	2.0	2.0
Total Resource Benefits	\$47.3	\$58.8
Total Resource Costs	\$40.2	\$48.3
Total Resource Benefit/Cost Ratio	1.1	1.1

JURISDICTIONS PROMOTE BETTER ENERGY PERFORMANCE

EIP - Palm Desert Energy Improvement Program

AB 811 amends Sections 5898.12, 5898.20, 5898.22, and 5898.30 of the Streets and Highways Code, and adds Sections 5898.14 and 5898.21 relating to contractual assessments, allowing local jurisdictions to raise and disburse funds to finance energy equipment and conservation measures.

Loan document that describes the loan for a renewable energy system or energy efficient equipment as an assessment to the property pursuant to Section 5898.30 of the California Streets and Highway Code.

Assessment or from the administration or registration of any associated bonds or reserve or other related funds (the "Annual Administrative Assessment"). The Annual Administrative Assessment shall not exceed _____ Dollars (\$_____) per year. **The Assessment** and the Annual Administrative Assessment, and the interest and any penalties thereon shall constitute a lien on the Property until they are paid. The installments of the Assessment and the Annual Administrative Assessment (including principal and interest) shall be collected on the property tax bill pertaining to the Property, and shall be subject to the same penalties, remedies, and lien priorities as for property taxes in the event of non-payment. The Borrower hereby expressly consents to the levy of the Assessment and the Annual Administrative Assessment and the imposition of the lien on the Property as described herein and in the Act.

(e) The amount of assessment installments that will be placed on the Property each year is set forth in Exhibit "C" attached hereto and incorporated herein by this reference.

(f) The Assessment may be prepaid, in whole or in part, at any time upon the payment of a premium in an amount equal to three percent (3%) of the amount of the Assessment to be prepaid.

2. Use of Proceeds.

All proceeds of the Loan shall be used by Borrower for the sole purpose of paying for the reasonable costs and expenses of the Work on the Property, and in connection therewith the Borrower shall comply with all requirements set forth herein, in the Application and in the Report.

3. Disbursement Procedures.

(a) Notwithstanding anything to the contrary contained herein, the City shall have no obligation to disburse the Loan Amount hereunder unless and until each of the following conditions is satisfied, or any such condition is expressly waived by the Director:

(i) The receipt by the Director of a written certification from Borrower, and the contractor(s), if any, that performed the Work, stating that the Work for which disbursement is requested is complete, and the actual cost of such Work. Such certification shall be in form and substance acceptable to the Director.

(ii) An inspection of the Work by the OEM, and a determination by the Director that the Work has been completed in full compliance with the requirements of the Loan Documents.

(iii) The receipt by the Director of such other documents and instruments as the Director may require, including but not limited to, if applicable, the sworn statements of contractor(s) and releases or waivers of lien, all in compliance with the requirements of applicable law.

JURISDICTIONS PROMOTE BETTER ENERGY PERFORMANCE

Local Ordinances

PALO ALTO MODEL GREEN ORDINANCE

The [Palo Alto Green Building Ordinance](#) is notable in that:

- It recognizes the embodied energy in existing buildings.
- It reduces the number of GreenPoint Rated™ checklist points by up to 20 points in residential projects that are designated on the City's Historic Inventory, and for structures eligible for the National Register of Historic Places, provided the proposed construction is found consistent with the Secretary of the Interior's Standards for Rehabilitation.
- Exemptions for compliance may be granted based on a demonstrated conflict between historic preservation goals and sustainability goals.
- Provides for future reports to be written by the Architectural Review Board and others to evaluate the results of the implementation of this ordinance.

JURISDICTIONS PROMOTE BETTER ENERGY PERFORMANCE

RECO – Berkeley

Residential Energy Conservation Ordinance

- Adopted in 1985 with the intent of increasing the energy and water efficiency in existing Berkeley residences. This long-standing goal contributes to the Berkeley Climate Action goal of reducing Berkeley's overall greenhouse gas emissions by 80% by the year 2050.
- **When does RECO apply?** RECO applies to all homes, residential areas of mixed-use buildings, tenants-in-common, condominiums, multi-family properties, live-work spaces and boarding houses
- **Renovation Trigger:** All homes or apartment buildings undergoing renovations with a combined permit value of \$50,000 or more **must** demonstrate compliance with RECO requirements
- **Sale or Transfer of Property Trigger:** All homes or apartment buildings, sold or transferred **must** demonstrate compliance with RECO requirements by being inspected and filing "Form A - Certificate of RECO Compliance" with the City of Berkeley.

Estimated Costs

	Per unit	Total Cost
Single Family (23,000)		
Performance Test	\$750	\$17,250,000
Improvements	\$7,500	\$172,500,00
Multi-Family (25,000)		
Performance Test	\$150	\$3,750,000
Improvements	\$1,500	\$37,500,000
Total Residential Costs		\$231,000,000

Sacramento has three times the household number: \$693,000,000!



Berkeley FIRST: The Basics

- **Enables property owners to install energy projects w/ no upfront cost**
- **City provides financing thru issuing bond**
- **Cost repaid on property tax bill over 20 years**
- **Based on 'voluntary assessment district' concept (Mello-Roos Community Facilities Act of '82)**
- **Start w/ PV, then move to thermal & efficiency**



2008 Berkeley FIRST Pilot Program

- **Initial pilot was open to 40 properties**
- **Bond issuance for \$1.5 million**
- **Renewable Funding, LLC purchased the bonds and administered online application process**

Phase 2 will include efficiency and solar thermal

- **Financing availability?**



Benefits to Property Owners

Addresses major barriers to energy improvements:

- **High upfront cost to property owner**
- **Long payback period**

Benefits:

- **No upfront cost to property owner**
- **Payments fixed for 20 years**
- **Payments stay with the property**
- **Financing competitive with traditional equity line**
- **Decreased utility bills**



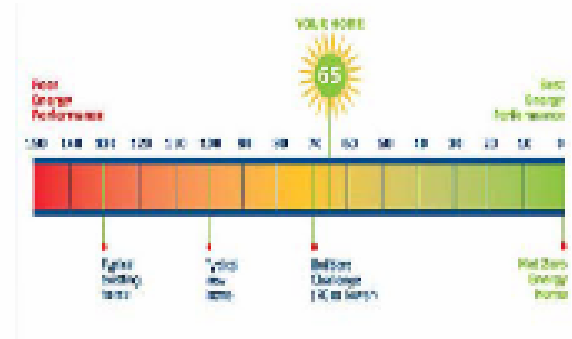
For example...

Solar Project Cost	\$28,077
CSI Rebate	(6,108)
City Program Cost	538
Financed Amount	\$22,507
Interest	7.75%*
Annual Tax Payment =	\$2,193 / \$183 mo.



HERS II

California Home Energy Rating Certificate



California Home Energy Rating
 A certifies that the
 requirements of the
 California Energy Commission
 www.energy.ca.gov

Site Information

Address
 123 Jones Street
 Anywhere, California 91234

General Information
 Conditioned Floor Area 2,000 SF
 Conditioned Volume 10,000 CF
 Bedrooms 4
 House Type Single Family
 Foundation Type Split-on-Grade

Energy Efficiency Features

Insulation
 Ceiling R-38
 Wall R-19
 Floor over crawlspace R-19
 Sill Edge I-2"

Windows
 Frame Full Glaz Wood
 Glazing Double-pane

Heating System
 Condensing gas furnace 0.98 AFUE
 Sealed and distribution ducts

Cooling System
 None

Ventilation System
 None

Water Heating System
 Gas storage tank 0.62 EF
 ICS solar system

Energy Impact

Greenhouse Gas Emissions
 Carbon Dioxide 100 tons/year

Energy Consumption
 Electricity (kWh/year)
 Driving —
 Lights —
 Appliances —
 Total —

Natural Gas (therms/year)
 Space Heating —
 Water Heating —
 Total —

Operating Cost (\$/year)
 Electricity —
 Gas —
 Total —

Renewable Energy Production
 None

Information goes here on compliance with other programs

Qualifying Information Goes Here

HERS Provider and/or Sponsor Co-Branding Logos Go Here

HERS Provider
 Acme Energy Rates Homes
 304 Energy Efficient Way
 Faver, Anytown, California
 www.AcmeEnergyRatesHomes.com

Rating Information
 Rating Number 1000-1234
 Certified Rate EEH-1234
 Issued in Stockton, CA
 Rating Date January 20, 2010

CityFIRST

City Financing Initiative for Energy Efficiency, Renewable and Solar Technology

Voluntary Program allows property owners to install solar and energy efficiency projects with little or no upfront cost. Costs repaid on property tax bills over 20 years.



CityFIRST: How it Works

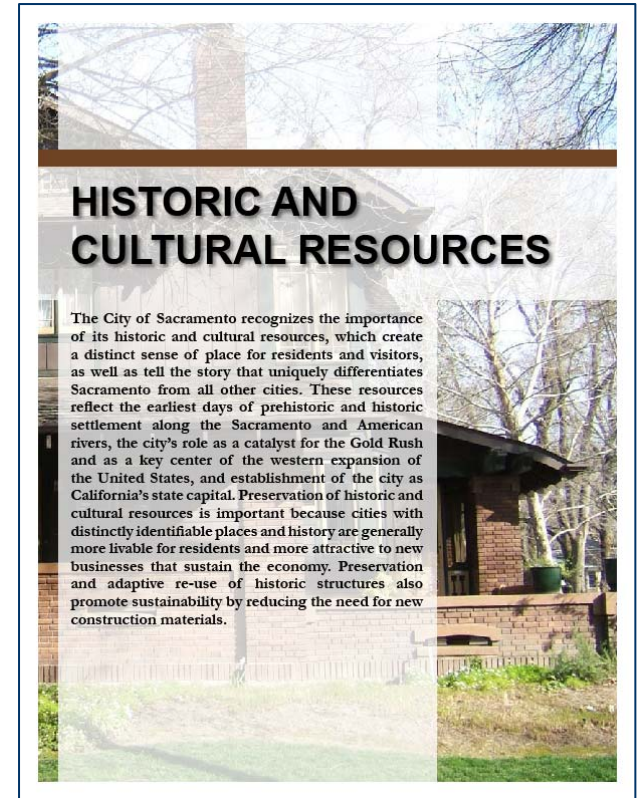
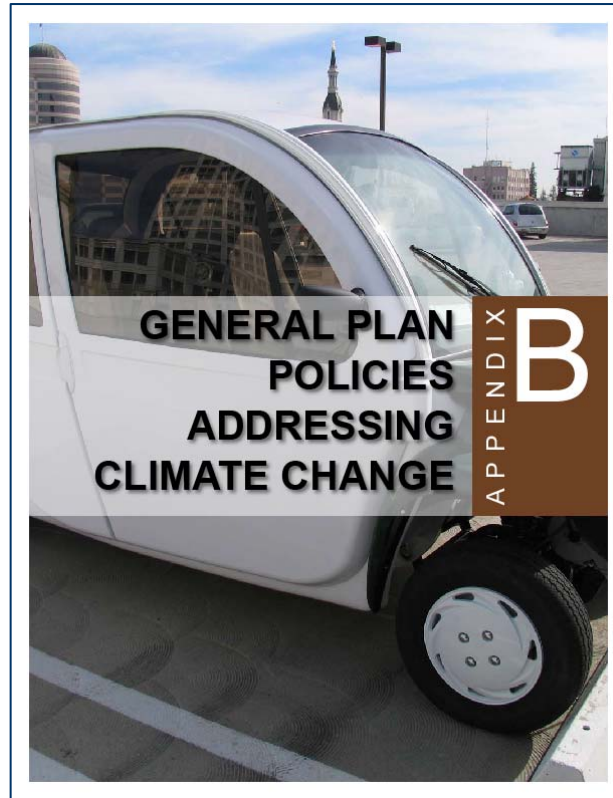
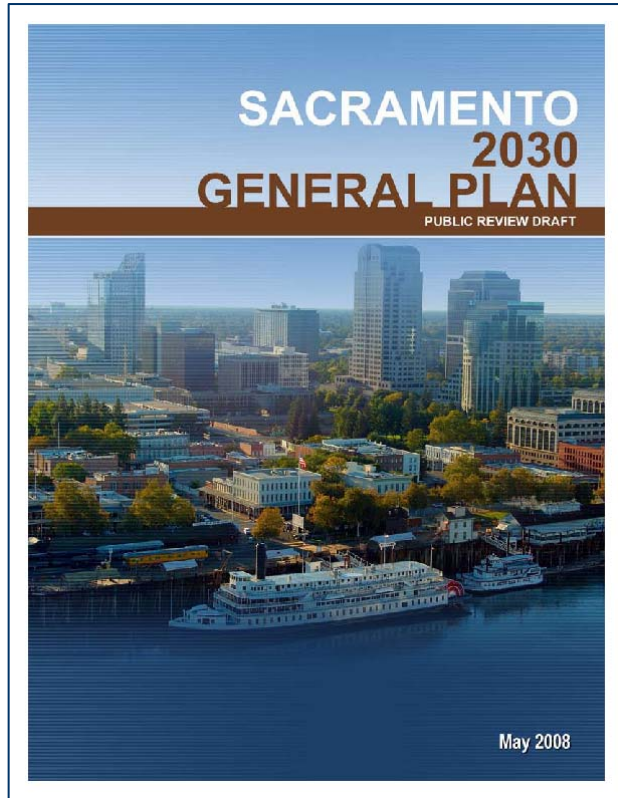
City or county creates type of land-secured financing district

Property owners voluntarily sign-up for financing and install energy projects

Proceeds from Clean Energy Bond provided to property owner to pay for energy project

Property owner repays bond through property tax bill over 20 years

SACRAMENTO 2030 GENERAL PLAN ADAPTIVE REUSE RECOGNITION



SACRAMENTO 2009 IMPLEMENTATION PLAN IMPLIED ADAPTIVE REUSE RECOGNITION

Creating a Sustainable City:
2009 Implementation Plan



City of Sacramento

STIMULUS BILL: \$250 M GRANT; TAX CREDIT EXTENTION

H. R. 1

One Hundred Eleventh Congress of the United States of America

HOUSING PROGRAMS

ASSISTED HOUSING STABILITY AND ENERGY AND GREEN RETROFIT INVESTMENTS

For assistance to owners of properties receiving project-based assistance pursuant to section 202 of the Housing Act of 1959 (12 U.S.C. 17012), section 811 of the Cranston-Gonzalez National

Tax Credits for Energy-Efficient Improvements to Existing Homes. The bill would extend the tax credits for improvements to energy-efficient existing homes through 2010. For 2009 and 2010, the bill would increase the amount of the tax credit to thirty percent (30%) of the amount paid or incurred by the taxpayer for qualified energy efficiency improvements during the taxable year. The bill would also eliminate the property-by-property dollar caps on this tax credit and provide an aggregate \$1,500 cap on all property qualifying for the credit.

subchapter IV of chapter 31 of title 40, United States Code: *Provided*

ENERGY ISSUES FOR HISTORIC BUILDINGS

Secretary of the Interior's 10 Standards for Rehabilitation

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

ENERGY ISSUES FOR HISTORIC BUILDINGS

Issues: Landscaping

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10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

ENERGY ISSUES FOR HISTORIC BUILDINGS

Issues: Rehabilitation of original finishes

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

ENERGY ISSUES FOR HISTORIC BUILDINGS

Issues: Removal of original or addition of inappropriate features

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
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10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

ENERGY ISSUES FOR HISTORIC BUILDINGS

On-Site Energy Options



Solar Rights Act

Civil Code Section 714:

714. (a) Any covenant, restriction, or condition contained in any deed, contract, security instrument, or other instrument affecting the transfer or sale of, or any interest in, real property that effectively prohibits or restricts the installation or use of a solar energy system is void and unenforceable. (b) This section does not apply to provisions that impose reasonable restrictions on solar energy systems. However, it is the policy of the state to promote and encourage the use of solar energy systems and to remove obstacles thereto. Accordingly, reasonable restrictions on a solar energy system are those restrictions that do not significantly increase the cost of the system or significantly decrease its efficiency or specified performance, **or that allow for an alternative system of comparable cost, efficiency, and energy conservation benefits.**

(e) Whenever approval is required for the installation or use of a solar energy system, **the application for approval shall be processed and approved by the appropriate approving entity in the same manner as an application for approval of an architectural modification to the property**, and shall not be willfully avoided or delayed.

ENERGY ISSUES FOR HISTORIC BUILDINGS
Off-Site Energy Options

SMUD solar shares

<http://www.smud.org/community-environment/solar/solarshares.html>



OHP RESOURCES

Sustainable Preservation Coalition

**Working together on integration
of preservation values into the
revised version of LEED.**



NATIONAL TRUST
for HISTORIC PRESERVATION™



OHP RESOURCES



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OFFICE OF HISTORIC PRESERVATION

Welcome to OHP

STATE OFFICE FURLOUGHS CLOSE OHP 1st & 3rd FRIDAYS

Until further notice, the Office of Historic Preservation will be closed on the **first** and **third Friday** of each month beginning Friday, February 6, to comply with the Governor's furlough order. No one will be in the office on the first and third Fridays to answer phones or e-mails.

MISSION

The mission of the **Office of Historic Preservation (OHP)** and the **State Historical Resources Commission (SHRC)**, in partnership with the people of California and governmental agencies, is to preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future.

OHP RESOURCES



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Newsletter



GREEN PRESERVATION
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LIFE CYCLE COST
ACCOUNTING

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SOLAR RIGHTS ACT

SUSTAINABILITY
INFORMATION
RESOURCES

LEED - SUSTAINABILITY

SUSTAINABILITY

The accepted definition of sustainability from the U.N. World Commission on Environment and Development's 1987 report, "Our Common Future" is that sustainability involves "meeting the needs of the present without compromising the ability of future generations to meet their own needs." The intersection of sustainable design and historic preservation would seem a natural alliance.

Older and historic buildings comprise more than half of the existing buildings in the United States. Retention and adaptive reuse of these buildings preserves the materials, embodied energy, and human capital already expended in their construction. The recycling of buildings is one of the most beneficial "green" practices, and stresses the importance and value of historic preservation in the overall promotion of sustainability.

OHP RESOURCES

The 2009 CLG Grants Manual includes bonus points for incorporating sustainable topics in a proposed project.

2009 California CLG Grants Manual

Prepared by Local Government Unit Staff
Office of Historic Preservation

**GRANT APPLICATIONS MUST BE RECEIVED BY 5 pm
Monday, 27 April 2009**

OHP will not accept facsimile (FAX) or electronic mail submissions.
Incomplete application packages will not be reviewed.
Postmarks are not acceptable.

NOTE: This manual and all related documents and forms are available on [OHP's website](#) on the [CLG Grant Program](#) web page.

Live links in this manual are indicated by blue text which is underlined. Clicking on a live link should take you to the appropriate web page or online document. Should there be a problem with a link in this document, refer to the documents listed individually on the [CLG Grant Program](#) web page.

Information about the [Office of Historic Preservation](#) (OHP)
or the
[Certified Local Government \(CLG\) Program](#)
is available online

This publication has been financed in part with Federal funds from the National Park Service, Department of the Interior, under the National Historic Preservation Act of 1966, as amended, and administered by the California State Office of Historic Preservation. The contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior.

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OHP RESOURCES



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TRAINING and WORKSHOPS

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PRESENTATIONS FROM PAST WORKSHOPS

2008 CALIFORNIA PRESERVATION FOUNDATION (CPF) CONFERENCE PRESENTATIONS

RIVERSIDE COUNTY Cultural Resources Pro-Seminars & Orientation Classes

Riverside County requires all professional-level archaeologists certifying reports submitted to the County of Riverside to be certified as having attended an orientation/professional topics training session once very two years. Sessions are open to those not seeking certification, space permitting. For more information, contact Julie Urias jurias@rctlma.org or Leslie Mouriquand lmouriqu@rctlma.org or visit Riverside County's [Cultural Resource Review](#) website.

March 20, 2009 – Archaic Period Archaeology (Melinda Horne and Donn Grenda)(register by March 6, 2009)

Tell us your experiences with sustainable preservation

www.ohp.parks.ca.gov

