



New Foundations for Community-based Energy Efficiency
Presented by US HUD

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Integrating Climate Action Planning, Green Building, and Home Energy Retrofits

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What is a Comprehensive Home Energy Retrofit?



Source: Renewable and Appropriate Energy Lab



What is a Comprehensive Home Energy Retrofit?

- ❖ **Comprehensive Retrofit Fixes the Right Things First**
- ❖ Reduces a home's energy demand (through better insulating and air sealing) to lessen energy supply needed by other systems
 - Lowers the necessary size and cost of heating, cooling, and renewable energy equipment
 - Can achieve 30 to 40% energy savings at low cost
 - The money saved by doing Energy Efficiency first actually pays for the high cost of solar!



Green Home Retrofits Address Multiple Goals



- ❖ Promote home energy retrofits as 1st step toward comprehensive green home improvements



Don't Reinvent the Wheel

- ❖ Tap industry expertise, implement Best Practices for
 - Marketing, education, and outreach
 - Contractor training & green job development
 - Incentives and financing
 - Quality Assurance
 - Project tracking, GHG quantification & reporting



Harness the Market Value of Green Ratings

- ❖ Analysis of 3,000 Seattle-area home sales, Sep. '07—Mar. '08
- ❖ Green homes sold:
 - For 4.8-10.5% more
 - 24% faster

Northwest Multiple Listing Service



Contractor Training Required

Skill Set	Credential
Home Performance Contracting	Building Performance Contractor, BPI Certified Building Analyst 
Home Energy Rating	California Whole House Home Energy Rater
Green Building	GreenPoint Rater 



Financing & Incentive Guidelines

- ❖ **No Free Audits.** Tie Audit incentives to implementing recommendations.
- ❖ **Offer contractor incentives.** They are the sales force
- ❖ **Pay for performance.** Require min. 20% improvement, demonstrated by HERS or Building Performance Contractor test-in & test-out
- ❖ **Partial financing for solar-only projects.**





GreenPoint Rated Provides Tracking & Verification

Build It Green - Projects Dashboard - Mozilla Firefox

http://builditgreen1.feynman.net/ProjectsDashboard.aspx

GreenPointRATED

PROJECTS DASHBOARD | START NEW PROJECT | REPORTS | RESOURCE ROOM | CONTACT BIG | LOGOUT

home / PROJECTS DASHBOARD

Good afternoon James. Below is your summary of current BIG GPR projects. Sort the table by any column header or use the search tool to narrow your results. To view more details about a project in-depth, click in any data field.

SEARCH TABLE Search

All Fields Application Date Approved Date County Advanced

Projects Summary display [-] [+] [all] results [print table] [<<<] [<] [1] [>] [>>>]

Title/Status	Submittals	Type	Rater	Developer	City	Phased	Logo Use	Assigned
Oak Glen / Applied	(Fin) Complete (37)	SF	Joe	Hammond Fine Homes	Penngrove	No	Applied	Unassigned
Wallace Residence / In Progress	(Fin) Complete (37)	SF	Joe	NA	Woodside	No	Applied	Unassigned
Malek Residence / Applied	(App) Applied (37)	SF	Joe	Safwat Malek		No	Applied	John
4580 Dawn Lane, Soquel / Applied	(Fin) Complete (37)	SF	Joe	Bill Lindeke	Soquel	No	Applied	Unassigned
Wallace Residence / Applied	(App) Complete (37)	SF	Joe	NA	Woodside	No	Applied	Unassigned
Malek Residence / Applied	(App) Applied (37)	SF	Joe	Safwat Malek		No	Applied	James
4580 Dawn Lane, Soquel / Finalized	(Fin) Complete (37)	SF	Joe	Bill Lindeke	Soquel	Yes	In Review	Jill
Wallace Residence / Applied	(App) Applied (37)	SF	Joe	NA	Woodside	No	Applied	Unassigned
Villa Terra / Applied	(App) Applied (37)	SF	Joe	Noel Cross Architect	San Jose	No	Applied	Unassigned
Oak Glen / Applied	(App) Applied (37)	SF	Joe	Hammond Fine Homes	Penngrove	No	Applied	Unassigned
Wallace Residence / Applied	(App) Applied (37)	SF	Joe	NA	Woodside	No	Applied	Unassigned
Oak Glen / Applied	(App) Applied (37)	SF	Joe	Hammond Fine Homes	Penngrove	No	Applied	Unassigned
Malek Residence / In Progress	(App) In Review (37)	SF	Joe	Safwat Malek		No	Pending	Unassigned
4580 Dawn Lane, Soquel / Applied	(App) Applied (37)	SF	Joe	Bill Lindeke	Soquel	Yes	Applied	Unassigned
Villa Terra / In Progress	(App) Pending (37)	SF	Joe	Noel Cross Architect	San Jose	Yes	Complete	Unassigned
4580 Dawn Lane, Soquel / Applied	(App) Applied (39)	SF	Joe	Bill Lindeke	Soquel	No	Applied	Unassigned
Villa Terra / Applied	(App) Applied (40)	SF	Joe	Noel Cross Architect	San Jose	No	Applied	Unassigned

display [-] [+] [all] results [print table] [<<<] [<] [1] [>] [>>>]

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Climate Calculator Outputs

- ❖ Savings from building green:
 - Therms
 - kWh
 - GHGs of refrigerant
 - Waste (tons)
 - Gallons of water indoors & outdoors
 - Vehicle miles traveled
- ❖ CO₂ equivalents of all above
- ❖ Forecasted and actual savings
- ❖ Footprint
- ❖ Scope 1, 2 & 3 emissions
- ❖ Results on GPR Consumer label

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GreenPoint**RATED**

EXISTING HOME

Whole House

ADDRESS: Freeda Court
732 Hayes Avenue
Livermore CA, 94550

YEAR BUILT: 1950, upgraded to 2005 codes

BASED ON: Single Family, ver. 1.0

PERFORMANCE ABOVE A CONVENTIONAL
HOME BUILT IN THE SAME YEAR.



Estimated resources saved versus a conventional home

5368 gallons of water saved per year

7443 kilowatt hours saved per year

5 tons of CO₂ emissions avoided per year

34% energy efficiency improvement overall

www.GreenPointRated.org



In Summary...

- ❖ Collaborate regionally by pool Energy Efficiency & Conservation Block Grant funds (min. 10%)
- ❖ Reward performance-based home improvements
- ❖ Set & enforce clear standards, provide smart incentives & easy financing
- ❖ Promote home energy retrofits as first step toward comprehensive green home improvements
- ❖ Tap industry expertise for
 - Marketing, education, and outreach
 - Contractor training & green job development
 - Incentives and financing
 - Verification, QA / QC protocols
 - Project tracking, GHG quantification & reporting



Contact Us

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