



The California New Homes Program **CONNECTION** Single Family



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Contact us via e-mail at:

CANHP@icfi.com



2006-2008 SCE California New Homes Program

Welcome to *Connection* – the newsletter of the SCE California New Homes Program-SF

The homebuilding industry continues to respond to a number of challenges by constructing homes with a firm foundation of energy efficiency.

As a response to the housing market's downturn and Governor Schwarzenegger's plan for the "greening" of California's housing, builders are charting plans for the future of energy-efficient and green building practices. According to some experts, not only has green building and conservation emerged as the most important trend in homebuilding and consumer lifestyles, it will also help drive the U.S. economy once the current recession rebounds.

According to a National Association of Home Builders (NAHB) survey, nearly 90% of the respondents were concerned about the impact their homes have on the environment. Top rated energy-efficient items such as ENERGY STAR® windows, appliances, and insulation add tremendous value to a home but may add higher costs to construction.

The NAHB, the Building Industry Association and other building industry groups are lobbying Congress to extend tax

incentives for energy-efficient residential new construction.

SCE's *California New Homes Program* can also help. The SCE portfolio of programs offers incentives to single family and multi-family residential builders to encourage energy efficient sustainable design. In addition to incentives, we offer training workshops, technical support, and marketing resources that will help make the most of your program participation.

This issue of *CONNECTION* features a comprehensive selection of articles that focus on emerging construction standards. These include information on CANHP and the New Solar Homes Partnership, an overview of the most common Green programs in California, and how to build to 15% above code.

Above all, we value our relationship with Southern California's residential builders. Feel free to contact us and let us know how we can effectively and efficiently meet your needs.

Best regards,
John Morton,
Program Manager

The BUZZ

Upcoming CANHP Training Events:

Shades of Green: From Green Point Rated to LEED Certified

You are invited to another full day workshop hosted by CANHP and presented by **LEED for Homes** and **Build It Green** to learn about these two green building programs, green building resources, and about available incentives to help offset the costs of the shift toward greener construction.

September 10th, 2008
8:00 am. - 5:00 pm



SCE's AGTAC Facility in Tulare
4175 S. Laspina Street, Tulare, CA

Breakfast and Lunch along with networking opportunities will be provided!

Register at <https://www.sce.com/ECR/> now!

Residential New Construction Rebate Programs– What you Need to Know in 2009-2011, October 7th, 2008

Mark your calendars to learn about the new financial incentives, and marketing and training opportunities available through the 2009-2011 CANHP and NSHP! Updates to the CHEERS and Cal-Certs registries will also be discussed in breakout sessions.

October 7th, 2008 at CTAC

CANHP and the New Solar Homes Partnership

SOLAR is the new buzz word at most building industry green events. In this edition of CONNECTION we help you find ways to facilitate the installation of solar photovoltaic (PV) systems on your new homes!

The California Energy Commission (CEC) *New Solar Homes Partnership* (NSHP) program provides financial incentives and marketing support for installing eligible solar PV systems on new homes in SCE's service territory. The goal of the NSHP is to create a self-sustaining market for solar homes in California. The \$400 million dollar NSHP aims to install solar on 50 percent of new homes in the next 12 years.

Eligibility for participation in the NSHP is determined by the level of energy efficiency of the new home. The minimum level of energy efficiency required for photovoltaic incentives is 15 percent (Tier 1) better than California's current Title 24 standards.

By participating in SCE's California New Homes Program NSHP option, not only do builders receive competitive financial incentives to offset the cost of adding energy efficiency measures, they receive assistance in all aspects of program participation.

SCE strongly encourages builders to participate in CANHP for the energy efficiency measures required by NSHP. See CANHP incentives in the table here.

CANHP Incentives

	COASTAL		INLAND	
	SF	MF	SF	MF
15% > T24 (NSHP Code plus / ENERGY STAR)	\$400	\$150	\$500	\$200
20% > T24 (ENERGY STAR ONLY)	N/A	N/A	\$700	\$275
35% > T24 (NSHP Code Plus Required. ENERGY STAR Optional)	\$1,200 - \$1600	\$1/kWh	\$1,400 - \$1800	\$1/kWh

Remember there are two pots of money available to you, one for the energy efficiency measures (CANHP) and the second for solar photovoltaic systems (NSHP)!

For questions regarding NSHP, please contact Gerry Castro at SCE. He can be reached at gerry.castro@sce.com.

Revised Changes to ENERGY STAR Thermal Bypass Checklist

Per an ENERGY STAR for homes release earlier this month, the July 1st change to the thermal bypass checklist (TBC), addressing floors between conditioned and exterior spaces, has been withdrawn. These floors will not require six sided assembly as previously specified. As per current practice, five sided assembly, the four sides and the top, will still be required. However, the requirement of the bottom of the insulation to be flush with the cavity will not be implemented.

In the Spotlight

Our ENERGY STAR...



Our ENERGY STAR this quarter is Lennar Homes who has shown their commitment to energy efficiency by committing a total of 7 projects to the Program.

Lennar Valencia has committed 3 projects at the Tier-II level of 35% above Title 24 and 2 projects at the Tier-I level of 15% above Title 24, for a total of 527 homes. Lennar Fresno has committed 2 projects, one at Tier-I and one at Tier-II, for a total of 153 homes. On top of their performance path incentive Lennar is also taking advantage of the prescriptive incentives CANHP offers for ENERGY STAR appliances. Their total

incentives from CANHP are well over \$1,000,000!

Lennar has recognized the business value of energy efficient homes by instituting their SOLARplus campaign. SOLARplus homes are energy efficient and feature beautifully integrated solar roof tiling. Solar homes are also eligible for incentives from the New Solar Homes Partnership. The demand for environmentally friendly homes is growing everyday and Lennar has correctly positioned itself to exploit this expanding market.

Congratulations to Lennar!

Green Building Programs In California

Today, “green” building is all the rage. Green homes not only save resources and money, they also last longer, hold their value better, and are healthier and more comfortable for residents. While there is no standing definition of what makes a building “green”, most residential green building certification programs are based on the “systems-based approach” to designing and constructing a home.

The five most common themes of green building are energy efficiency, water conservation, indoor air quality, resource conservation, and waste recycling. A systems-based approach relies on the architect and homebuilder realizing that each theme of green building is intrinsically connected to the other themes and to the residential system as a whole. For example, a low-flow showerhead conserves water but it also saves energy needed to heat that water. Proper HVAC design and installation saves energy and increases indoor air quality.

The benefits of green building also often overlap. The recycling of waste materials (or conservation of construction materials so as not to make waste) benefits the environment but also makes economic sense to the builder. Using low-VOC paints not only benefit the environmental health of a home but also benefit the homebuilder by decreasing their financial liability.

There are many green building options available in California; four of the most popular are summarized below. Twenty-seven cities in Southern California have their own green building programs as well. Some of these are based on the following programs while some are based on specific prescriptive measures.

	GreenPoint Rated	LEED for Homes	CA Green Builder
Energy Efficiency	T-24 + 15%	T-24 + 15%	T-24 + 15%
Water Conservation	X	X	X
Indoor Air Quality	X	X	X
Resource Conservation	X	X	X
Waste Recycling	X	X	X
Community	X	X	
ENERGY STAR		X	
3rd Part Verification	Yes (GreenPoint Raters)	Yes (LEED for Homes “Provider”) ¹	Yes (HERS Rater)
Participation Type	Point based (min. 50 GreenPoints)	Certified, Silver, Gold, Platinum	Binary
Scope	CA	National	CA

¹The LEED for Homes “Provider” for CA is Davis Energy Group

Each program touches upon the five main themes of green building, though their requirements within each theme vary greatly. However, they all share one common requirement: **all of the programs require a home to be at least 15% more energy efficient than Title-24.** As this is the base requirement for joining SCE’s California New Homes Program any home certified under any of the above programs automatically qualifies for financial incentives from SCE. In fact energy efficiency is widely considered to be the cornerstone of a green home. This is because energy use has such far reaching consequences, including global climate change, acid rain, and dependence on foreign oil.

Certifying new homes under a green building program provides an excellent point of market differentiation for a homebuilder, yet this process can be expensive. SCE’s CANHP is here to help; our program offers incentives on a performance path and additional incentives for prescriptive measures. See <http://www.sce.com/builder> or contact CANHP@icfi.com for more information on how to receive these incentives.

Help, I need to get to 15%!

The basis of most energy efficiency programs is 15% better than the current code, which in California is Title 24. Here we present the who, where, when, what, and why low down for energy efficiency options!

Who should I consult for energy efficiency?

Use a certified energy analyst (CEA) to help you reach the very attainable goal of 15%. A CEA has demonstrated their commitment to energy efficiency by voluntarily becoming certified. The certification demonstrates their knowledge and experience that will assist you in reaching your goals.

Where do I find a CEA?

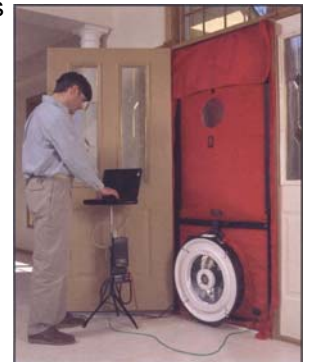
The California Association of Building Energy Consultants (CABEC) has a website which lists all certified energy analysts.

When should I get a CEA involved?

At the beginning of the project! Title 24 is based on trade-offs; the earlier a CEA is involved, the more options the client will have to choose from.

What are my options to achieve 15%?

- *Use better glass.* A standard dual glazed vinyl/wood window is based on a U-factor of .58 and SHGC of .65. Much more efficient glass is available; take advantage of this low cost option.
- *A radiant barrier* is a fairly simple upgrade that works by reflecting the heat before it reaches the attic. It also significantly reduces the cooling load. The radiant barrier is of good value in hot climate zones.
- *Overhangs!* Lots of times consultants may not calculate all of the overhangs; but they should not be overlooked because they make a substantial difference in also reducing the cooling load.
- *A Home Energy Rating System (HERS) rater* is responsible for field verification and diagnostic testing of certain energy efficiency features. To locate a HERS rater contact one of the three organizations which certify HERS raters- cheers.org, calcerts.com, or cbpca.org.
- *Duct Leakage Test* measures the amount of leakage in the duct system. If the ducts are properly installed then complying with the 6% or less leakage should not be a problem. This provides a good deal of credit in Title 24 and more importantly provides greater comfort and savings to the end user.
- *Quality Installation Insulation (QII)* verified by a HERS rater that the insulation was installed correctly; this should be done already! There should be no holes, gaps or compressions in the installation of the insulation.
- *Blower Door Test* measures the tightness of the home envelope and helps identify any leaks or holes.
- *Supply Air Flow Balancing* measures the amount of air delivery at each register. By balancing the air flow to each room the client is guaranteed a higher degree of comfort with less drafts.
- *TXV/EER.* The Thermostatic Expansion Valve (TXV) is a fairly standard option for most air conditioners; it just has to be verified by a HERS rater. The Energy Efficiency Ratio (EER) can also be increased without too much additional cost to the builder.
- *Tankless Water Heaters* provide a credit in the energy calculations because they reduce the standby loss of the standard storage type tank water heater; they also save space.
- *Higher Efficiency Furnace, AFUE 80% - 90%*
- *Higher Efficiency Air Conditioner, SEER 14.0+*
- *Increase Duct R-value* from the standard R-6 to R-8
- *Increase insulation Values;* try R-38 in the roof and R-19 in the walls or perhaps try rigid insulation of a standard 2x4 wall to boost the thermal resistance of the assembly. Cool roofs also help to reduce the cooling loads.



Blower Door Test Demo

Why is 15% so important?

All types of “green” programs start with a base of 15% better than Title 24. SCE’s CANHP pays incentives depending on the level of performance above the minimum standard. Not only are there financial incentives but SCE also offers marketing and training support. In today’s reduced market incentives can help offset some of the costs for including these energy efficiency measures mentioned above.