

California Advanced Homes Program

program overview

HELPING BUILDERS TODAY
FOR TOMORROW'S ENVIRONMENT



california
advanced homes™



program components & benefits

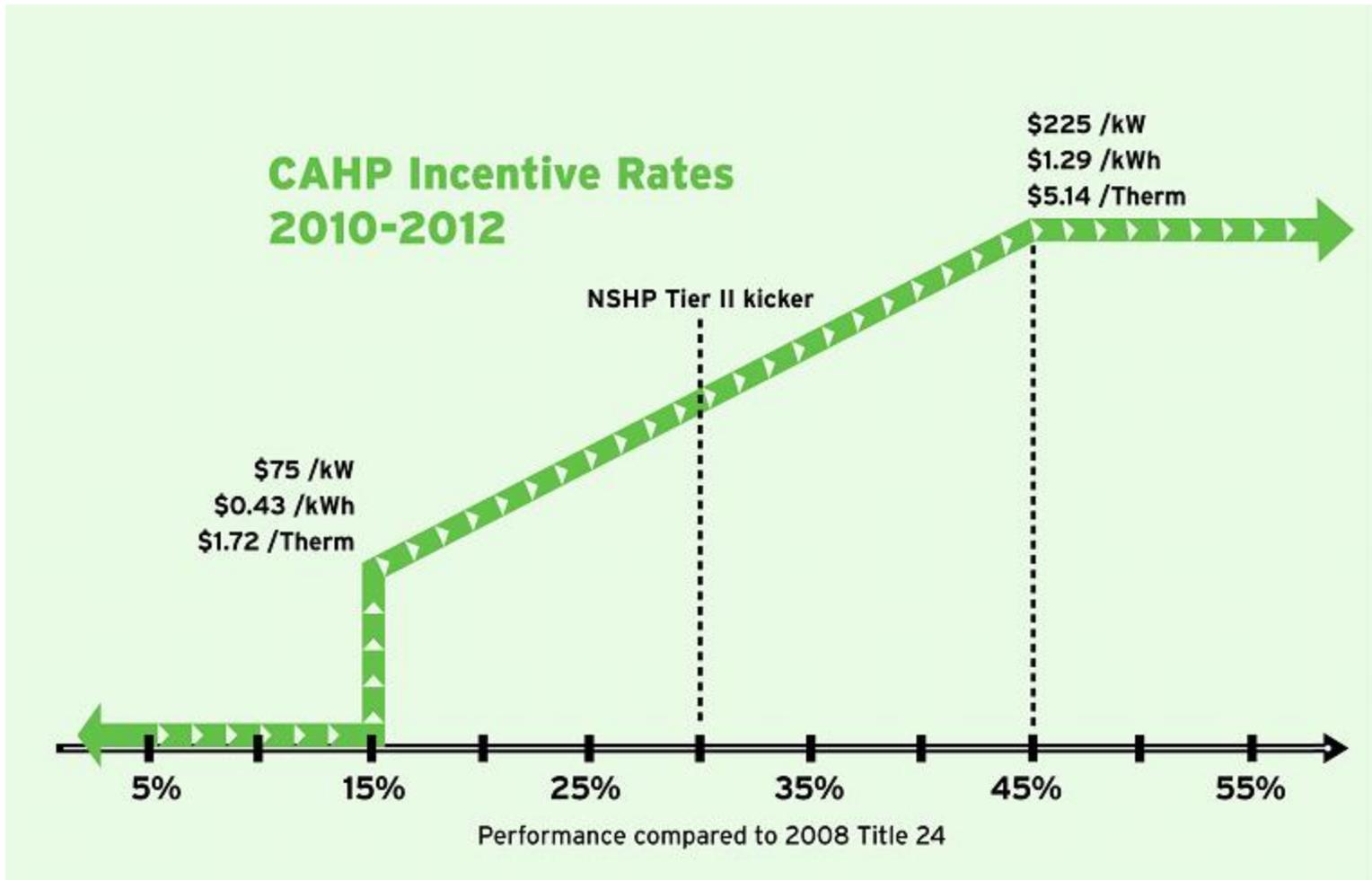


Benefits: Why Builders Should Participate

- Incentives – Base Incentive, plus ‘Bonus’ Kicker
- Independent 3rd Party Inspections for Quality Control
- Marketing Potential
Optional ENERGY STAR participation receives EPA recognition through ENERGY STAR campaigns
- Homebuyers save on utility bills
- New homes buyers enjoy comfortable, energy-efficient homes
 - High-efficiency water heaters
 - Proper home sealing
 - Radiant barrier
 - High-performance windows
 - ENERGY STAR appliances
 - EE heating & cooling equipment
 - Upgraded insulation
 - Tightly sealed air ducts
 - Maximum Cooling Capacity

Note: Projects must be enrolled prior to installation of drywall

incentive structure



2013 program updates



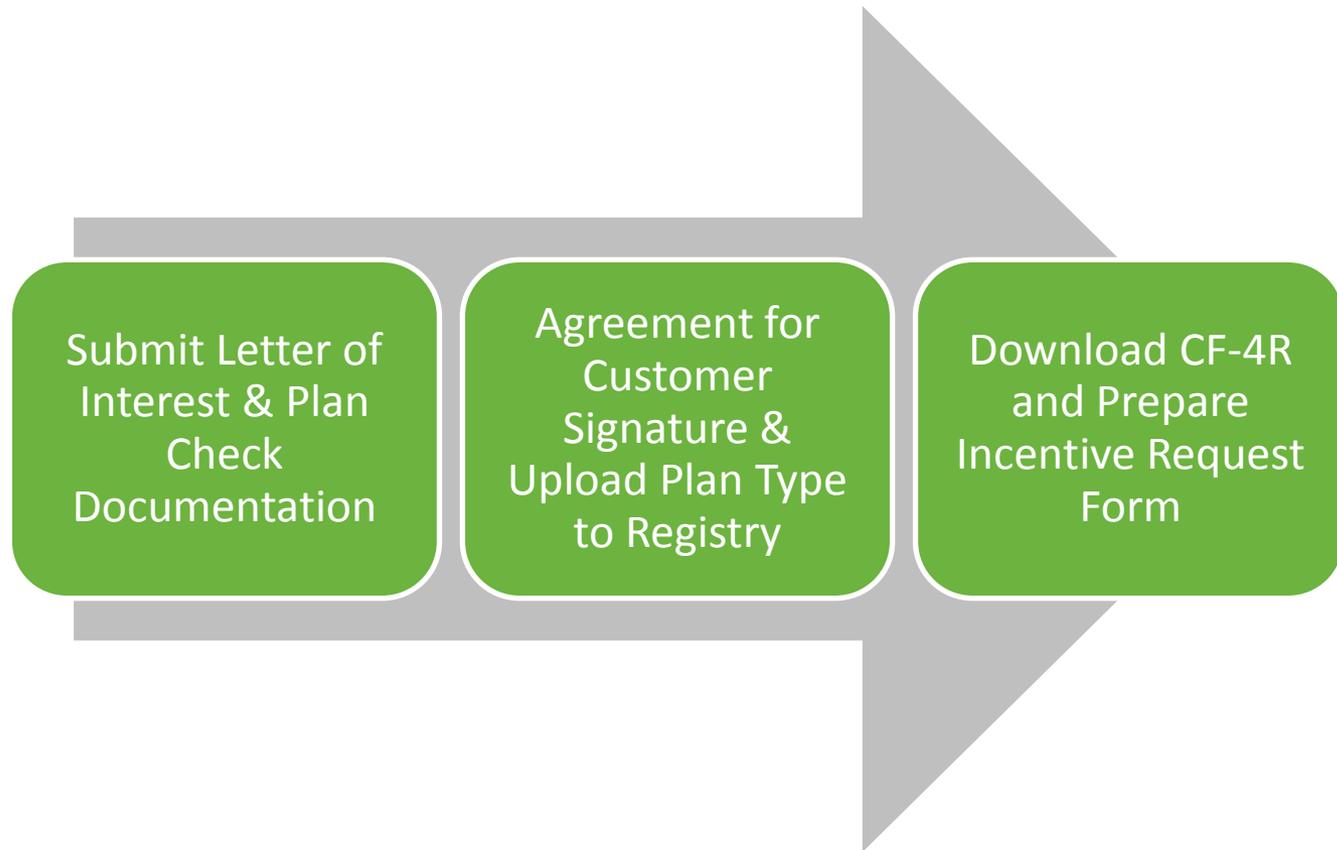
- Discontinued LEED & GreenPoint Rater kickers
- Discontinued Compact Homes kicker
- Discontinued kW reduction kicker (PV)
- ENERGYSTAR kicker updated to provide marketing material
- Introduction of 2013 Code Preparation kicker
- Multi-family energy modeling requirement

'bonus' kickers



- **California ENERGY STAR New Homes**
 - Marketing Support - “Credits” will be provided towards the purchase of ENERGYSTAR branded marketing material
 - \$40 Single Family, \$10 Multi-Family
- **2013 Code Preparation - NEW!!!**
 - \$1,000 Single-Family, \$200 Multi-family
 - Plan must exceed 2008 T24 by 40%
 - Plan must include the following measures:
 - Duct Leakage HERS measure
 - Verified Fan Watt Draw HERS measure
 - Verified Cooling Coil Airflow HERS measure
 - R-30 minimum Attic/Roof insulation
 - R-19 minimum Floor over unconditioned space insulation
- **New Solar Homes Partnership (NSHP) Tier II**
 - \$1,000 Single-Family, \$200 Multi-family
 - Plan must exceed 2008 T24 by 30%
 - 30% reduction in cooling

enrollment process



what is the CA HERS scale?



- Runs from 250 to 0 (Net Zero TDV)
- Based on TDV values of all end uses within home's envelope
- Static scale: 2008 prescriptive home = 100

How is it calculated?

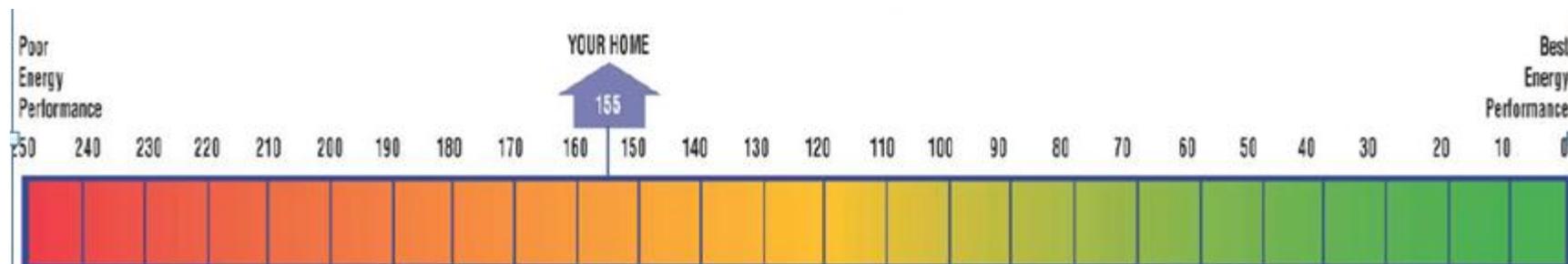
$$\text{HERS Index} = \frac{\text{TDV}_{\text{Rated}} - \text{TDV}_{\text{PV}}}{\text{TDV}_{\text{Reference}}} \times 100$$

Includes
Heating, Cooling, DHW & Fans
Lighting, Plug Loads, Appliances

2014 program metric = CAHP score

Augmented CA HERS Index for program purposes

$$\text{CAHP Score} = \text{CA HERS Index} - \text{CAHP Points}$$



“CAHP Points” to be developed and awarded for energy efficiency measures not included in current CA HERS Index.

- 5 points – Low Home Energy Use (< 27,000 annual kBTU)
- 5 points – Ultra Low Home Energy Use (< 16,000 annual kBTU)
- 3 points – Future Code Preparation measures
 - 100% high efficacy lighting
 - Ducts in conditioned space
 - High R-value walls; QII
- 3 points – DOE Home Challenge
 - Aggressive and well designed EE prescriptive measures
 - High levels of documentation and verification

additional CAHP incentives

\$40 per lot HERS Rater incentive to compensate for extra effort or rating, registration and paperwork.

- Additional Energy Features checklist must be completed for each lot
- Lots must be properly registered before incentives are paid

\$20 per lot Energy Consultant incentive to compensate for extra modeling to achieve CAHP Score

- Non-T24 energy modeling must use defaults or be supported by supplementary spec sheets
- Plan Review comments must be returned within 10 business days.

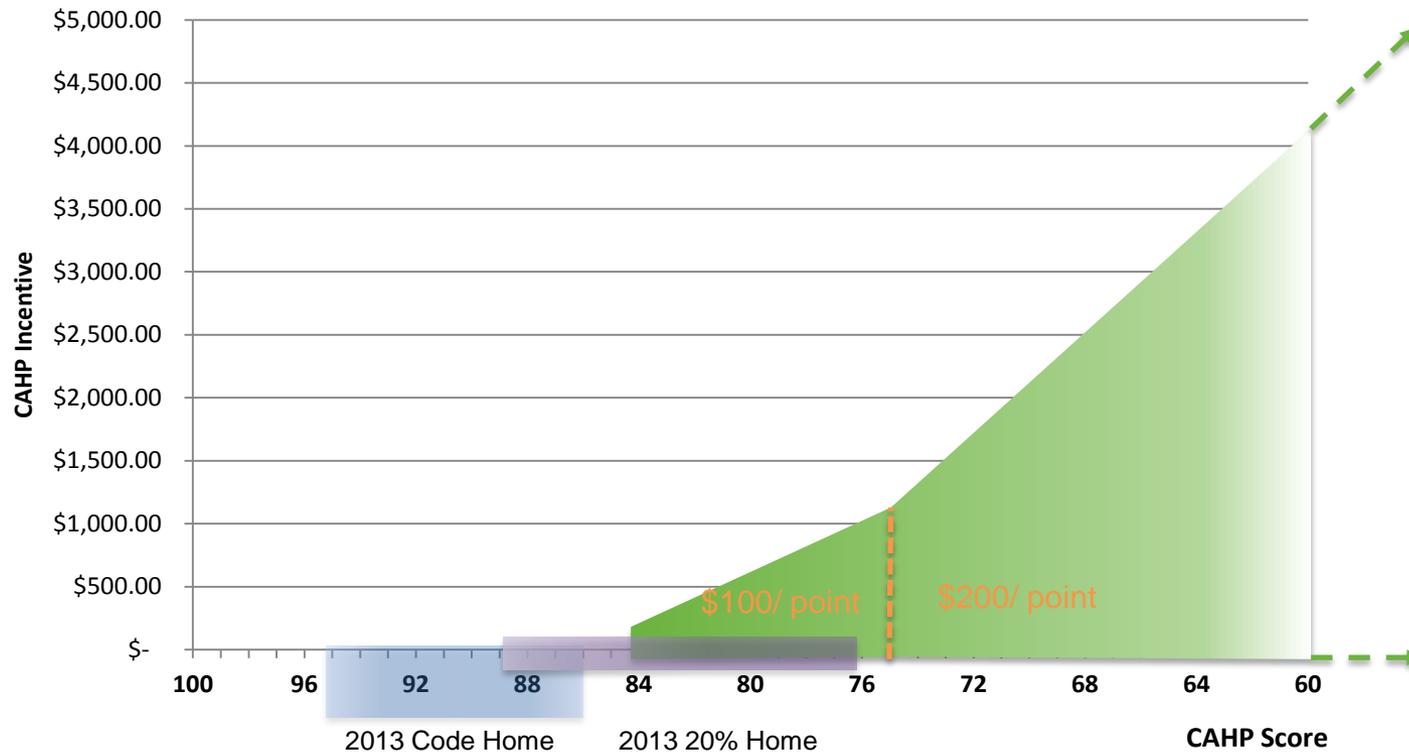
65%/35% split for Electricity vs. NG when applicable (dual utility, or single commodity)

CAHP will continue to pay orientation specific incentives

program incentive structure

- \$200 for program entry CAHP Score of 84
- \$100 for each point up to 75
- \$200 for each point thereafter

CAHP Incentive Structure



util-1r mock up

All program data can be generated by CBECC-res or EnergyPro

2014 CAHP Incentive Worksheet

Util-1R

Plan 4

1,565 sq.ft.

Climate Zone 4

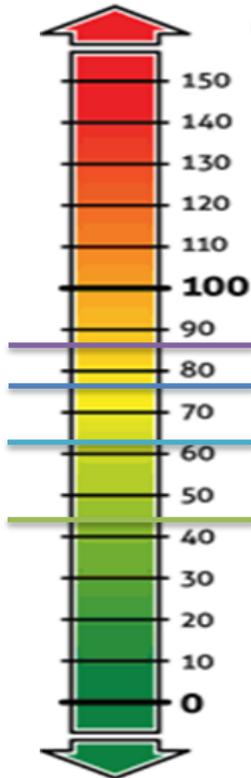
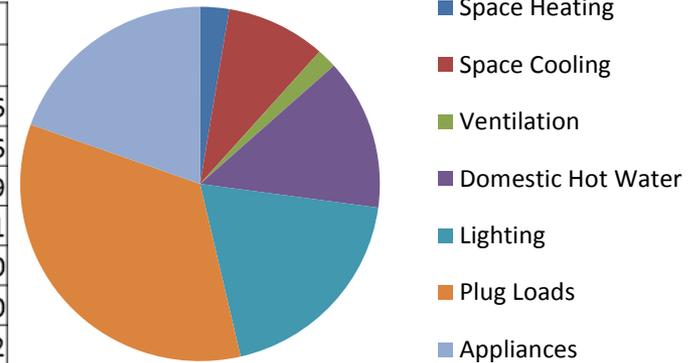
San Jose

Date: 4/12/2014

North – 37,445 kBTU

Annual MTDV Energy Use

	Standard	Proposed	Margin
Space Heating	9.8	3.2	6.6
Space Cooling	22.6	11	11.6
Ventilation	3.1	2.2	0.9
Domestic Hot Water	32	16.9	15.1
Lighting	23.6	23.6	0
Plug Loads	41.8	41.8	0
Appliances	26	24	2
Totals	158.9	122.7	36.2



75 CAHP Score

CAHP Points Awarded

- Early 2016 Code Adoption - 3 points
- 100% High Efficacy Lighting - 1 point

Program Savings

	Standard	Proposed	Margin
kW	4.3	3.2	1.1
kWh	4,321	3,250	1,071
Therms	482	270	212
Comp %			23%
Cool%			51%

CAHP Score - 75 = \$1,700

- CA HERS Index
- CAHP Score
- Low-Energy Use Bonus
- Near-ZNE Bonus



thank you

Q&A Session

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