



# ENERGY STAR Certified Homes: Version 3.1 For California

## Comment Period

October 27<sup>th</sup>, 2015





## Agenda

- Current CA ENERGY STAR program requirements.
- Recent CA code activity.
- ENERGY STAR response to CA code activity.
- Proposed CA v3.1 ENERGY STAR program requirements.
- Comment Period.
- Q&A.



## Current California program requirements

- Two key components:





## Recent California code activity

- CA adopted its latest code, the 2013 Building Energy Efficiency Standards on July 1, 2014, which is more stringent than prior code.
- CA IOU's also developed a statewide incentive structure called the California Advanced Home Program (CAHP).
- A CAHP score of 84 signifies state-defined savings of more than 15% and is eligible for incentives.

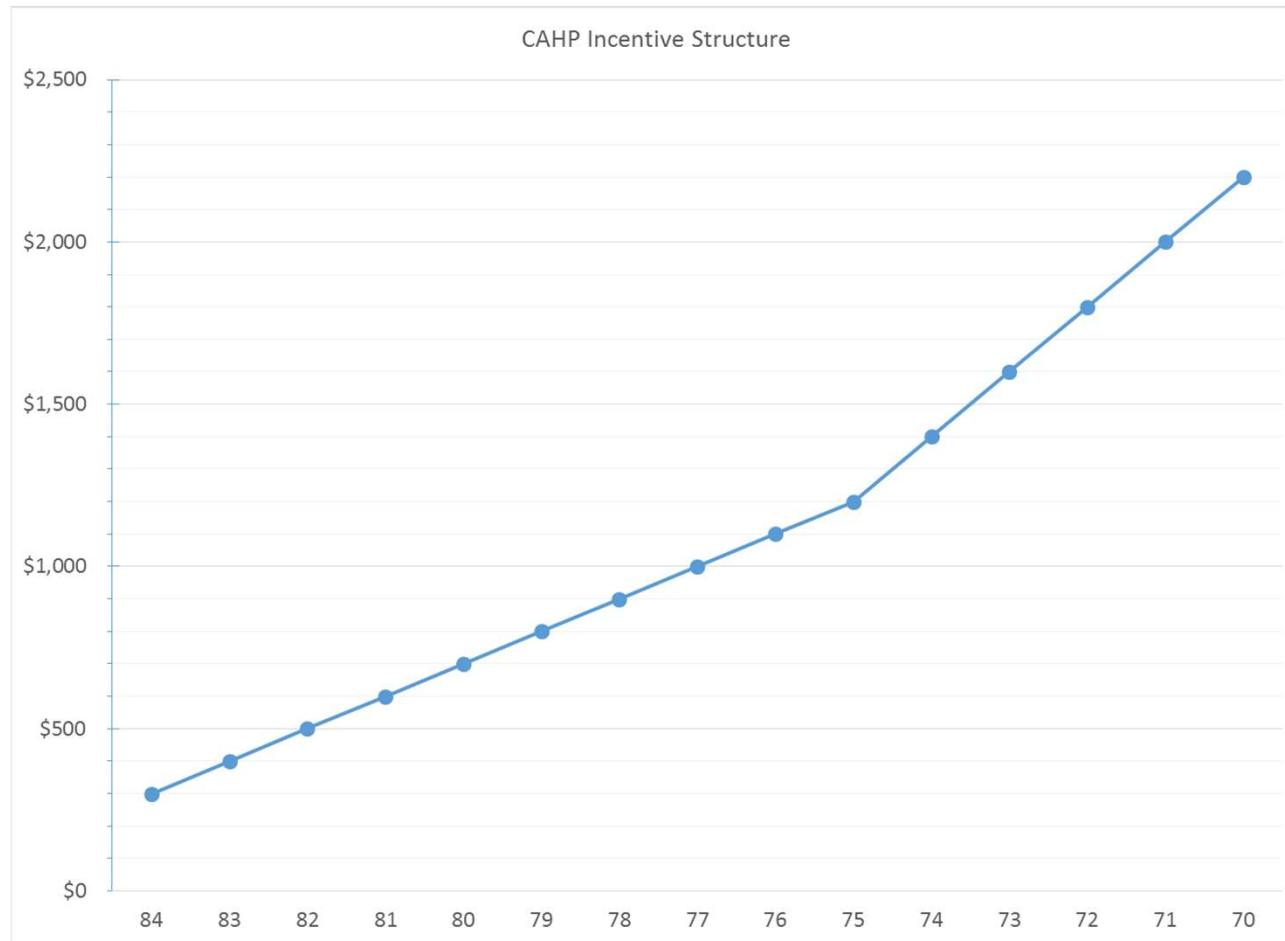


## Recent California code activity: CAHP incentive structure

- 85 to 100: \$0
- 75 to 84: \$300 plus \$100 for each CAHP point below 84
- 0 to 75: +\$200 for each CAHP point below 75
- Additional “Kicker” incentives and points also available



## Recent California code activity: CAHP incentive structure





## ENERGY STAR response to CA code activity

- EPA needs to define and implement ENERGY STAR Version 3.1 in CA to maintain meaningful savings.
- Aligning the v3.1 performance target with a CAHP score  $\leq 84$  would be ideal.
- EPA analyzed typical homes across all California Climate Zones using the efficiency measures in the Version 3.1 national program to see how they performed.



## ENERGY STAR response to CA code activity: Single-family gas homes using national v3.1 efficiency measures

Fuel Type	IECC Climate Zone	CEC Climate Zone	Savings (CBECC-Res)		Incentive
			CAHP Score	% Above Title 24	
Gas	2	15	80	12%	\$700
Gas	3	2	77	30%	\$1,000
Gas	3	3	87	15%	\$0
Gas	3	4	76	32%	\$1,100
Gas	3	5	87	9%	\$0
Gas	3	6	84	23%	\$300
Gas	3	7	87	14%	\$0
Gas	3	8	86	15%	\$0
Gas	3	9	78	25%	\$900
Gas	3	10	76	23%	\$1,100
Gas	3	11	73	27%	\$1,600
Gas	3	12	76	24%	\$1,100
Gas	3	13	73	27%	\$1,600
Gas	3	14	74	28%	\$1,400
Gas	4	1	79	36%	\$800
Gas	5	16	69	38%	\$2,400
Gas	6	16	69	39%	\$2,400





## ENERGY STAR response to CA code activity: Single-family electric homes using national v3.1 efficiency measures

Fuel Type	IECC Climate Zone	CEC Climate Zone	Savings (CBECC-Res)		
			CAHP Score	% Above Title 24	Incentive
Electric	2	15	86	3%	\$0
Electric	3	2	103	-35%	\$0
Electric	3	3	112	-58%	\$0
Electric	3	4	96	-20%	\$0
Electric	3	5	106	-53%	\$0
Electric	3	6	99	-28%	\$0
Electric	3	7	100	-35%	\$0
Electric	3	8	99	-23%	\$0
Electric	3	9	91	-6%	\$0
Electric	3	10	88	-7%	\$0
Electric	3	11	89	-6%	\$0
Electric	3	12	97	-26%	\$0
Electric	3	13	89	-4%	\$0
Electric	3	14	90	-2%	\$0
Electric	4	1	28	84%	\$10,600
Electric	5	16	89	-1%	\$0
Electric	6	16	87	2%	\$0



## ENERGY STAR response to CA code activity: Multi-family gas homes using national v3.1 efficiency measures

Fuel Type	IECC Climate Zone	CEC Climate Zone	Top End Unit		
			Savings (CBECC-Res)		
			CAHP Score	% Above Title 24	Incentive
Gas	2	15	89	4%	\$0
Gas	3	2	89	15%	\$0
Gas	3	3	93	14%	\$0
Gas	3	4	88	17%	\$0
Gas	3	5	98	7%	\$0
Gas	3	6	91	14%	\$0
Gas	3	7	92	16%	\$0
Gas	3	8	90	14%	\$0
Gas	3	9	88	13%	\$0
Gas	3	10	87	13%	\$0
Gas	3	11	87	11%	\$0
Gas	3	12	89	11%	\$0
Gas	3	13	87	11%	\$0
Gas	3	14	89	9%	\$0
Gas	4	1	94	12%	\$0
Gas	5	16	89	16%	\$0
Gas	6	16	88	18%	\$0

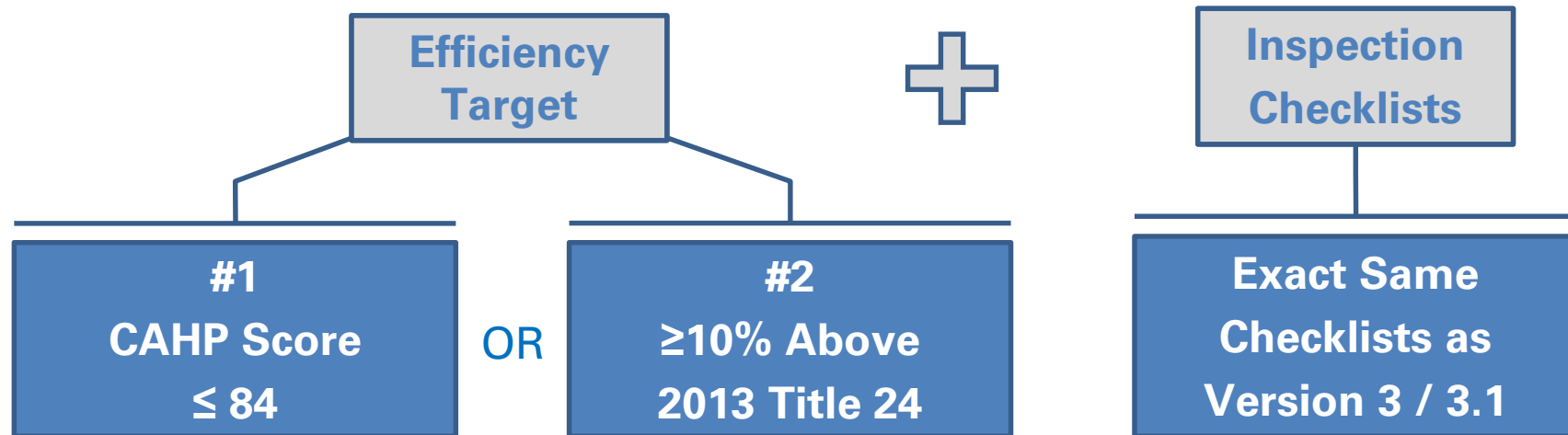


## ENERGY STAR response to CA code activity

- Using the same efficiency measures required in the national v3.1 program:
  - Single-family homes:
    - Gas homes often hit  $\leq 84$  CAHP and get incentives
    - Electric homes may be able to hit 10% above Title 24, but won't get incentives
  - Multi-family homes:
    - Gas homes often hit 10% above Title 24, but won't get incentives



## Proposed CA v3.1 ENERGY STAR program requirements





## Performance Target #1: CAHP Score $\leq$ 84

- California Advanced Home Program Score  $\leq$  84
- Calculated using California Title 24 energy modeling software.
- Mandatory completion of v3 / v3.1 inspection checklists.
- Pros:
  - Results in incentives of \$300 (or more for lower scores).
  - Aligns with state metrics and program structure.
- Cons:
  - Difficult to achieve with electric homes, homes in coastal climates, and gas multi-family homes.



## Performance Target # 2: $\geq 10\%$ Above 2013 Title 24

- Savings of  $\geq 10\%$  above 2013 CA Building Energy Efficiency Standards.
- Calculated using California Title 24 energy modeling software.
- Mandatory completion of v3 / v3.1 inspection checklists.
- Pros:
  - Provides alternative for electric homes, homes in coastal climates, and gas multi-family homes to earn the ENERGY STAR.
- Cons:
  - Would not result in incentives.



## Proposed Timeline

- Typically, EPA intends to implement v3.1 one year after state-level implementation of more stringent code.
- For CA, this would mean homes permitted after July 1, 2015.
- However, CA code transition has been particularly rocky, in part due to new software programs.
- EPA would like to implement v3.1 as soon as possible.
- Proposed timeline for CA v3.1: Homes permitted starting 04/01/2016.



## Comment Period

- Draft program requirements have been posted to:  
<http://www.energystar.gov/newhomesCAv31>
- Comment period has begun and will end on Friday, November 6<sup>th</sup>, 2015.
- Visit webpage to download comment form.
- EPA intends to finalize the program requirements by the end of 2015.





## ENERGY STAR Certified Homes

### Web:

Main: [www.energystar.gov/newhomespartners](http://www.energystar.gov/newhomespartners)  
Technical: [www.energystar.gov/newhomesguidelines](http://www.energystar.gov/newhomesguidelines)  
Training: [www.energystar.gov/newhomestraining](http://www.energystar.gov/newhomestraining)  
HVAC: [www.energystar.gov/newhomesHVAC](http://www.energystar.gov/newhomesHVAC)

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