

California Regional Guideline ENERGY STAR v3 Qualified New Homes Comments

This is a compilation of all comments received by EPA during the California ENERGY STAR Qualified New Homes comment period ending March 22, 2011.

The following comments have been compiled from the California ENERGY STAR New Homes Proposed Guidelines Comment Forms submitted by respondents. The Environmental Protection Agency is not responsible for any typographical errors or omissions.

Table of Contents

Energy Inspectors	3
Energy Inspectors	4
Heschong Mahone Group.....	5
Sol Data Energy Consulting.....	6
Southern California Edison	8
Standard Pacific Homes	9



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: Energy Inspectors

Respondent Last Name: Gillett

Respondent First Name: John

Comments: I've reviewed the guidelines and the only thing that immediately jumps out is the timing of moving to V3. I would like to see a full 12 months between the requirement to move to V2.5 and the requirement to V3.0.

Would you like to discuss the guidelines over the phone to see if we can identify any other issues?



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: Energy Inspectors

Respondent Last Name: Ong

Respondent First Name: Wendy

Comments: We have reviewed the Energy Star V3 draft and our primary request is to have the Size Adjustment Factor (SAF) be integrated in the software. Otherwise, it will be difficult to have consistency if every CEPE rounding to different decimal places to determine the SAF. And, the reality that the California market has never been introduced to having this SAF so it could be easily forgotten in an interim step. We've contacted the California energy modeling software companies and they do not seem to be aware on the impact of V3 on their software. We believe it would keep the results more consistent if the software dictated whether a score is within the SAF. .



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: HESCHONG MAHONE GROUP

Respondent Last Name: Murphy

Respondent First Name: Linda

Comments: Hello EPA,

I am involved with the plan review process for 2 utility programs here in California. Our firm works with Pacific Gas and Electric Company (PG&E). We implement the multi-family (California Multi-family New Homes) program for both low rise and high rise buildings and we are administering the Single family program (California Advanced Homes). The single family program has a kicker for Energy Star, meaning that if the project is certified Energy Star, they receive additional incentive money.

I guess my comments are more to address the Quality Assurance aspects of the program rather than any one item within the program. For example:

HVAC contractor "A" installs systems for 2 different builders. Builder #1 goes through the Utility program plan review and fails the HVAC sizing criteria. Builder #2 does not go through the Utility program plan review and is certified Energy Star. HVAC contractor "A" does not provide any load calculations for either builder and doesn't change the installed equipment for either builder. Yet one project is deemed Energy Star and the other is not. My guess is that the HERS rater is certifying the one project as ES but without checking the sizing criteria. If the rater does not look at the equipment sizing until after it is installed, it's not likely the builder will change out the HVAC system at that time.

We had a project come through our plan review recently that at first passed the sizing criteria. There were some other review comments that needed to be addressed at the same time. When we received the revised Title 24 documents, the outdoor summer DB for the city had changed... 8 degrees higher. When we pointed this out to the energy consultant, they made the appropriate change but then declined to participate in Energy Star to receive the Utility kicker incentive because they failed the sizing test after the plan review comments were addressed.

It is my understanding that the other IOUs in southern California are not checking the HVAC sizing during a plan review but are relying on the Rater to do those reviews. If Raters are not involved at the beginning of the project to check the sizing, my guess is it's not checked at all and the homes are still certified as Energy Star.

"I've heard stories"... from raters who have not passed homes for Energy Star however the builder then contracted with a different Rater and the project was certified Energy Star.

In California, the CEC certified HERS Provider is the one responsible for Rater QA. At this moment, we only have 1 provider for the whole state. Is there any way the EPA can influence the CEC in some way to increase the QA effort in the state of California?

As a side note, is there a person within the EPA-Energy Star group to whom we can send questions for guidance on sizing criteria when builders are using Manual J load calcs instead of the ASHRAE

calcs within the T24 software? There appears to be some gaming going on but we cannot get any answers from EPA-Energy Star. The new Manual J has adjusted the duct heat gains and losses within the calculations from 15% to 40%... which obviously will increase the size of the equipment.

Thank you for listening.

Regards, Linda S. Murphy



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: Sol Data Energy Consulting

Respondent Last Name: Pemula

Respondent First Name: Sarah

Comments: During the Webinar a participant commented that the Title 24 load calcs are 1 to 1.5 tons less than ACCA loads, implying that the T24 loads are required and too restrictive. First, T24 only has an ac load limitation for a credit (Max Cooling Credit) not a requirement. Second, about the restrictive part, this has not been my experience in 10+ years of plan checking for new construction utility incentives. PGE had its own ac oversizing restriction for many years before the T24 Max Cooling Credit and the ENERGY STAR oversizing restrictions came into being.

Typically, the loads in the T24 calcs are within a ½ ton of Manual J when the input values are the same. Since they use different algorithms, they do not match up on item by item loads (i.e. the duct loads in Manual J are larger than the duct loads in Micropas) but overall, the whole loads are similar. I do not prepare ACCA load calcs myself, but I compare them to the T24 inputs and ask the right questions.

Currently, if a load calc is not submitted but ES is being pursued, I use the load in T24 to determine the ac size restriction. If a Manual J load is submitted, I review it for errors and inconsistencies with T24. Errors are very common in Manual J submittals and more than likely need to be redone. Applicants have pulled out of ES because the ac oversizing restriction. Especially with the 2008 standards, the loads have shrunk, probably due to the use of glazing with low SHGC's, around 0.25 or so.

Following is a list of errors I have found more than once in the Manual Js:

Outdoor Design Temperature: Temperatures greater than the 1.0% outdoor design temperatures

Radiant barrier at roof: In T24 energy calculations but not in Manual J load

Glazing values: U-values and SHGCs used for the construction components are worse than those used in the T24 calculations.

Glazing area: The glazing area in the load calculations does not match the glazing area shown on the plans or in the T24 calcs.

Floor heat loss: Heating load calcs show huge loads for slab floor from modeling the floor surface area rather than the slab edge area. (not an ac issue, but a funny error)

Duct load: Duct load calculated at 50% of the cooling load of the structure (see Manual J Project Summary).

This is curiously high considering credit is being taken for tight ducts. (I'm glad to see the alignment of the duct load to match closer to T24 with CA v3.)

Infiltration: The infiltration cooling load is larger than the envelope gain (see page 1 of Right-J Worksheet).

ENERGY STAR requires the infiltration rate to be 'tight'.

Mechanical Ventilation: Central ventilation is 2 to 3 times larger than the ASHRAE required ventilation rate.

This is not an error but a concern of mine, which is not addressed in the ES restricted inputs.

Equipment/appliance load: Equipment/appliance loads of 6000 Btu/hr to 12,000 Btu/hr. For T24 Max Cooling Credit, the appliance load is limited to 1600 Btu/hr.



ENERGY STAR New Homes Proposed Guidelines Comment Form

My understanding is that the HERS Rater will be responsible to review the loads prepared by the contractor rather than the plan check agency for the utilities. My experience has been that not many people want to take the time to review the loads nor have the knowledge to recognize funny numbers.

Hope this helps with your process of fine tuning CA v3.

Sarah Pernula

CEPE CEA (Res & Nonres) CEM LEED AP

Sol Data Energy Consulting

401 - C College Avenue

Santa Rosa CA 95401



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: Southern California Edison

Respondent Last Name: Morton

Respondent First Name: John

Comments: Thank you for the opportunity. I see nothing in these specs that seems to be onerous. The only thing I would say the wording on the 15% would be over current code at time of permit instead of locking into a specific code. This gives the program flexibility if the standards are not changed at the same time the energy code changes.



ENERGY STAR New Homes Proposed Guidelines Comment Form

Organization Name: Standard Pacific Homes

Respondent Last Name: Guerrieri

Respondent First Name: Karina

Comments: Per your below request to Kathy DeLucio my comments are as follows. I speak on behalf of the Sacramento Division only.

Per our VP of Sales and Marketing Energy Star is one of the most recognized brands for our consumers. For now, it remains important to participate in Energy Star to be competitive.

That being said I have a couple of points:

1. I do not believe us, nor our competitors, have realized the expense that will be associated with Version 3 that include, but not limited to, features beyond the prior 15% over T24 (some of my sample runs are coming out to 17%-21% over T24), increased HERS rater expenses and increased vendor costs to participate with completion of checklists. As builders become fully aware of these costs there could be a significant retreat in participation and perception of value. I have little confidence that many builders truly understand the impact of Version 3 beyond the belief there are a few extra checklists. I believe more training in "builder language" should be incorporated before finalizing an implementation date. I am sure you are not short on HERS input as they are the trade that will be benefiting most. In one week I have been approached by 3 new HERS raters in the area wanting our business. I realize the increased activity is due to CALGreen as well, but there is no doubt that they are seeing the dollar signs associated with this new version as well.
2. Whether it is CALGreen, Energy Star, Build It Green, or LEED everyone is attempting to be the leader in the push for GREEN. However, manufacturers are not catching up as quickly. In order to qualify we are finding it harder and harder to locate fair market priced equipment. The program qualifications are far ahead of the demand curve.
3. To continue to participate with these programs purchasing must begin to compromise other features in the home to be able to incorporate the higher cost Energy features and programs. I would ask that Energy Star recognizes how California already leads the country in energy efficient homes, and keep the % over T24 at 15% and roll out each checklist one by one to allow time for each to be adjusted to.