



NATURAL RESOURCES DEFENSE COUNCIL

**Comments on the Staff Workshop  
California Home Energy Rating System Program  
Phase II Regulations Development**

**May 8<sup>th</sup>, 2008**

The Natural Resource Defense Council (NRDC) appreciates the opportunity to comment on the Phase II regulations development workshop for the California Home Energy Rating System (HERS) Program. While we absolutely support the development of such a program and the efforts of the CEC, there are three items we would like to see further investigated and developed for the next workshop. We urge the CEC to consider our comments on these three topics:

- The need for an early Beta or testing version of the software,
- Harmonizing the reference home with the rest of the nation, and;
- Requiring the Custom approach for all HERS ratings.

**Background**

There are 12 million existing residences in California which consume 18 percent of the energy in the state. Many of these homes were built before the Energy Code was first developed and those that came after are well behind the most efficient homes built today. While much attention is currently being paid to newly constructed homes, we need to start focusing attention on the many non-compliant and energy-inefficient homes already out there. Furthermore, in order for California to reach the emissions reductions goals set forth by AB 32 and become a truly energy efficient state, we need to address the large piece of the energy pie attributed to existing homes. This program is the first and crucial step in that direction. We would like to commend the CEC on developing such a useful and necessary tool at a time when it is needed the most.

**Recommendations**

We believe that an early Beta version of the software could provide many benefits to the HERS program overall. There are many problems and obstacles that will surely present themselves in the field after the start of the program. Many of those issues could be resolved in advance with an in-depth testing period for the software. Similar problems are likely to arise when utilities develop retrofit incentive programs using the software; offering a beta version of the software standards allows program administrators to beta test it in the field simultaneously. We suggest that the CEC develop an early version of the software standard in advance of the desired release date and receive comments for incorporation into the final product.

In order for this program to have the relevance outside the California border that it will have inside, the reference home and scale need to be harmonized with the rest of the nation as much as is practical. In order for the reference home to harmonize, a 100 HERS score should be based on either the IECC residential energy code or RESNET's technical standard. Although the Title 24 2008 standard is more stringent than these codes, that will only mean a home built to California code will score less than 100 on the HERS scale, something in which all Californians should take pride. At least the option of modeling an IECC compliant home should be

considered since the customer for each modeling run may be different if federal incentives or tax-credits based on a HERS score were desired, for instance. Secondly, this reference home should stay fixed for the life of the program. In that manner each subsequent energy code revision will relate to a slightly lower HERS score and the path to high-efficiency homes can be charted. Another implication of this harmony is that the scale should maintain a 100 to 0 basis, where a reference home is 100 and a 0 home is an energetically net-zero home. The notion that Americans want 'more' rather than 'less' is faulty considering the recent public desire for efficient homes. Americans want to spend less, use less and thus a lower number will carry that message.

Our final comment concerns requiring the Custom approach. Considering the boundaries of the standard score are restricted to the home itself, the Custom approach should *also* be mandatory to capture all the energy demands outside the home yet still found on the energy bill for that property. Furthermore, using the actual utility bills to "inverse model" the actual energy demands of the home will be a highly effective way to produce quality models with accurate results. Using real utility bills in the Custom model will produce data easily used to improve the modeling software, thus increasing the confidence in the software and the credibility of the score. With a required Custom approach if a given homeowner were to request a HERS score she would get both the standard result, which would relate to the majority of homes of that type, and the Custom result which would apply to real-world energy use and potential reduction measures for her home in particular. Recognizing that requiring the Custom approach increases the demands of the HERS raters, we feel that most of the work for the Custom approach would already be included under the standard approach and the cost increase would be minimal.

### **Conclusions**

Given the early stages of the program, we urge that these comments and recommendations be considered and incorporated into the development of the program.

We greatly appreciate the opportunity to comment and will continue to support the progress of this incredibly positive program. We are available and willing to discuss this matter further with you.

Sincerely,

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