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Reference: Docket: 08-HERS-2
Subject: CBPCA Comments on Draft CEC HERS II Protocols

The California Building Performance Contractors Association (CBPCA) appreciates the opportunity to participate in the HERS II process and to offer these comments on the current draft protocols. The CBPCA strongly supports the HERS II goals and acknowledges with thanks the obviously extensive commitment and effort of the Energy Efficiency Division staff to serve the emerging home retrofit industry.

We particularly acknowledge and appreciate the changes in the CEC protocols since the previous version:

- Grouped measures (envelope, baseload, mechanical) to reflect a logical progression of analysis and home improvement
- Removal of year-later utility bill analysis for BPCs only
- Acceptance of standard 5% third-party verification process
- Current discussion regarding contractor licensing

The following comments are offered in the spirit of constructive suggestions to improve and make HERS II as practical and supportive of the home performance industry as possible. We will be pleased to discuss or clarify these comments at CEC's convenience.

- **Our principal remaining concern:** Rigid report requirement and mandated use of the "Standard Approach"
  - Conflicts with realistic homeowner education and selling approach; Far too much emphasis on energy savings; best way to save energy is to sell improvements that meet a broader range of needs
  - As we have noted before, our surveys of whole-house retrofit customers indicate that most of the motivation to invest in such improvements arises from non-energy benefits (comfort, health, safety, home maintenance, environmentalism, etc.). Yet the dominant emphasis of the required homeowner report is on the energy savings, resulting in a downplaying of the benefits that most homeowners actually care most about.

- Home performance contractors are likely to minimize the visibility and credibility of the required homeowner report (e.g., by using it only as an appendix to their own broader reports) to avoid its bias against the dominant non-energy motivations.

Recommendations: In both the Standard and Custom reports, add explicit approval for the rater or contractor to provide additional information to the homeowner on the broad range of benefits associated with the recommended improvements. Also include in the Standard Approach report a list of the limiting assumptions built into the analysis.

- **Licensing issues:** We have had substantial discussions with the CEC staff since the last hearing, and we are pleased with the results. We affirm the necessity of a certified Home Performance Contractor to have a B (general building contractor) license, in agreement with the CEC staff. This is in accord with state license requirements. Our current understanding is that in addition to leadership by a B contractor, all subcontractors on home performance projects should have the appropriate specialty C licensing. In addition, CBPCA encourages its members to certify its salespeople with the California State Licensing Board as "home improvement sales" specialists.

  In the last workshop, Mike Bachand asked about verifying the contractor's license: Who does it? CBPCA's position is that it is the HERS Provider's responsibility to collect license numbers, although not necessarily to formally verify them with CSLB. We have not found this to be a significant effort. The more difficult problem is in dealing with C-licensed specialty contractors who are enthusiastic about whole-house retrofitting but need the B license. This is a challenge sometimes, especially in qualifying applicants for training and certification as whole-house contractors, but still feasible.

  Recommendation: Require home performance contractors in the program to prove to the HERS Provider that they carry a valid B license and to certify that they use only qualified licensed subcontractors.

- **Rater-Contractor Relationships:** We continue to be skeptical about the practicality of the certified independent home performance rater model for inducing actual home energy improvements. Such independent home energy audits rarely result in significant home upgrades. Also, in our experience, home performance contractors are unwilling to accept the improvement analysis and recommendations of an independent rater, because the contractor becomes legally responsible for the results despite having no involvement in the analysis. Untrained contractors (and therefore often unaware regarding appropriate home energy improvements) may accept those rater's recommendations at their own peril, and due to their lack of training they are likely to do poor work.

  A principal concern is with the quality and extent of training to be received by the raters as well as their actual construction experience, which is often inadequate for adequate job specification. CBPCA provides much more detailed training in home analysis than is typically given to HERS Raters (several times as many

days, plus ongoing technical support) and we find that level of training to be essential (and well received) in addition to direct contracting experience. Even with adequate training, raters are likely to find it difficult to find high-quality contractors willing to work to their independent job specifications.

Recommendation: Encourage independent raters, with full disclosure to homeowners, to develop field experience with one or more qualified contractors in order to assure that their recommendations will be accepted by those contractors. Add approval for independent raters, with homeowner permission, to provide links to those specific qualified contractors.

- **Rater effectiveness in generating savings:** In addition to the continuing problem with the use of independent raters to define workscopes for separate contractors, as noted above, the "rater model" raises major concerns with program effectiveness. CBPCA has no problem with the involvement of raters and the use of energy ratings. However, we strongly encourage the CEC to consider allowing more effective business models for those raters.
    - We strongly question the "firewall" in the HERS II rater model between raters and contractors. This concept is included in the HERS II rules only to assure ethical behavior, but that can easily be assured in other ways, notably independent sampled job reviews and verifications as well as a mandatory process for homeowner satisfaction and complaint reporting. That separation greatly diminishes the likelihood of large-scale energy savings through a high penetration of high-quality jobs. One approach is to encourage raters to develop relationships with qualified contractor teams, as recommended earlier, with or without separation of businesses. Raters should be allowed to recommend contractors with whom they have enough contact to be confident of their capabilities, with or without any formal relationship. This is how successful independent home energy analyst/raters (such as Doug Garrett in Texas, among many others) operate in other states, and is accepted in Home Performance with Energy Star.
    - There is a major danger of job quality loss in the independent-rater approach for ratings when the homeowner chooses to have improvements done without the involvement of either the original rater or a qualified home performance contractor. Many homeowners are likely to engage untrained contractors who follow rater recommendations only generally and without regard to quality, since they are untrained and unaware of proper procedures. Even more important, in such projects no one is responsible for verifications unless the homeowner wants a post-improvement rating. Since such a rating has little actual value after the work is done, it is most likely that no one will collect test-out data and confirm quality. The rater left the job after doing the initial assessment, and the contractor has no incentive to follow up with quality assurance through post-testing.

  Recommendation: We believe that raters should be actively encouraged to work with contractors who either do the post-test verifications or encourage the use of

raters to do that quality assurance. But we feel that the present HERS II rules ignore this problem and exacerbate it by requiring that the rater be completely independent.

- **Use of grouped measures:** For cost-effectiveness discussions with homeowners, we strongly support the recent CEC revision that groups home energy improvement measures into a progression of three classes: First structural envelope improvements (air sealing, insulation, windows, shading, etc.), then baseload energy uses (water heating, lighting, appliances), and only then upgrades to mechanical HVAC systems. This is because reducing the thermal load is crucial in enabling the use of an energy-optimal HVAC system with smaller capacity, proper duct performance (static pressure, leakage, insulation), and balanced air distribution. Without such a logical sequence of improvements, important energy savings could easily be lost for the lifetime of any HVAC improvements made.

  The conventional modeling approach of arraying all energy efficiency measures is easily done but reduces the concept of systematic home energy optimization to a simple menu of improvements according to supposed cost-effectiveness. This is illusory, since it ignores the interactions among the various measures and the collective effects of first improving the building shell and baseload uses—which all determine the building's thermal load—and assumes that all measures are implemented independently. This results in measure cost-effectiveness numbers which have no relation to the reality of the actual cost-effectiveness of multi-measure home upgrades.

  Recommendation: We strongly support Bruce Ceniceros' original suggestion of the grouping strategy and encourage CEC's incorporation of it in the current version.

- **Non-Energy Benefits:** At present the HERS II draft has no mention of non-energy benefits in the Standard Approach. In addition, the Custom Approach permits discussion of such benefits in the homeowner report, but allows no quantification of such benefits. Clearly this conveys to the homeowner that such benefits are not considered important. As noted earlier, this is contrary to common sense as well as our survey results. It also ignores social science knowledge on the complexity of actual decisionmaking processes; people typically make major buying decisions such as a car or a home performance retrofit based on a variety of factors, not just cost savings.

  We recognize and agree that the HERS II process should not overly complicate the information it gives to homeowners. However, we feel that all reports, including that of the Standard Approach, should at least acknowledge the existence of a variety of benefits that the homeowner may find even more important than the narrow cost-effectiveness (really a misnomer) based on utility bill savings. In fact, truly comprehensive home energy retrofits are rarely defensible on such narrow economic grounds, so the offering of such retrofits must be sold by reference to the non-energy benefits that are valued by the client.

It is difficult to quantify non-energy benefits, particularly since they tend to be valued differently by different people (homeowners). We do not seek to have the HERS II process include any such attempt, at least at this time. This is still a topic of research. However, in all reports the potential value should be pointed out.

Recommendation: Include in both Standard and Custom reports either a standard statement or permit contractors to add their own selling points based on potential non-energy benefits attributable to the multi-measure retrofit.

- **Connection to utility programs:** It is CBPCA's position that the HERS II process should have strong links to utility incentive programs such as Home Performance with Energy Star.

    - Some states, notably Wisconsin, rely on the rater model but allow rater recommendations for qualified contractors in order to induce both quality and quantity of actual home improvements done.
    - Under the new California Energy Efficiency Strategic Plan, utilities need to induce multi-measure home energy efficiency improvements, not audits with no action, and will be providing incentives for complying contractors and projects.

  Recommendation: The rater model needs to have stronger action encouragements; perhaps link to HPwES or CBPCA websites for access to qualified contractors.

- **The 250 point scale**: We believe this extended scale is too extreme, although this is not a major concern. A limit of 200 could provide adequate scope and keep the baseline title 24 home at the midpoint.

    - The rationale for the 250 point scale seems extreme: If a home is so bad as to be over 200 even after extensive upgrades, having it still not show on the scale is in fact a very GOOD result. Owners of such homes need to know how excessive their home's energy wastage (or carbon footprint) is.
    - The Title 24 benchmark should be closer to the middle of the scale, to more clearly show the large opportunity for energy savings beyond Title 24 new construction—even in existing homes.

  Recommendation: Revert to a 200 point scale.

- **Custom Approach Scope:** We believe that even this more liberal optional presentation to the homeowner is misleading in its limited scope of concern.

    - The approach should allow ancillary and outdoor loads to be cited and acknowledged. It would be even better to include them in the simulation and home energy rating, since they're just as real as those inside the home.
    - Recommendations to homeowner should include such improvements. We also note Tom Conlon's alternative approach of citing those loads on the

rating certificate even if not included in the rating. This is decidedly less desirable and informative but perhaps a reasonable compromise.

Recommendation: Include all energy uses inside and outside the home, including grounds, in rater analysis, modeling, recommendations and HERS Rating certificate content.

- **Penalty on non-airconditioned homes**: Modeling non-airconditioned homes as if they were air conditioned seems to us to be hard to justify. Everyone wants their rating to be an accurate picture of their home's actual performance. Why make a non-a/c home look worse than it is? Perhaps we are not understanding the justification for this requirement.

  Recommendation: Include a clear explanation of this modeling decision in the homeowner report.

- **Slide 27 on C-E calculations:** Do measures with short lives get more credit than is due, over the 30-year term? This is an issue on which the HERS II process should be coordinated with the CPUC's required methodology for addressing measure lives in program cost-effectiveness. CPUC specifically requires proposed utility programs to provide cost-effective savings over at least a 20-year period, including required repeats of short-term improvements (such as CFL installations) based on measure life. Although the CPUC focuses on program cost-effectiveness rather than the homeowner's viewpoint, the same "level playing field" principle should apply. Documentation of this requirement is available on the CPUC website's listings of rulings; CBPCA can help identify those sources.

- **The DEER database:** The DEER database has been a source of much dispute among utility program implementers and regulators. Its vast scope required that the energy savings and costs of most measures were estimated by simulation modeling and not verified with actual field data. Informal reviews by contractors indicate that many measure costs are unrealistic. We appreciate that the Custom Approach permits the contractor's own cost estimates to be used, and that at least some consideration is being given to going beyond the DEER to improve realism.

  We note that the 2008 version of DEER has recently been declared by CPUC to be the standard for use in CPUC energy efficiency programs, so if the DEER is to be required as the initial cost reference in HERS II this new version should be used.

  As we understand it, in HERS II the certified simulation tool is to calculate the energy savings rather than using the DEER estimates. Please confirm/clarify.

- **Responses to prior comments of others:** We acknowledge the public comments posted on the Commission's web page for this proceeding, and offer the following responses to selected portions of those comments.

- Nittler: We share Ken's concern about the feasibility of having a competitive market in place for the required software on the schedule proposed for HERS II implementation. We recommend that the Commission take steps to assure that the HERS Providers and their contractors will have CEC-certified software choices available in time to prepare and begin their compliant programs on CEC's schedule. Otherwise that schedule should be delayed as necessary.
- Proctor: We respectfully disagree with John on the value of making the HERS conflict of interest requirements even more strenuous, and recommend continuance of the present language. The present requirements are reasonable and even more protection of the interests of customers and the program is provided by the verification processes as drafted. We have no comment on keeping, dropping, or changing the VSP program other than to note that the IOUs consider that process highly successful in generating large-scale energy savings.
- King/SBSI: We see no problem with Russ's recommendation to allow field training to include the option of realistic laboratory settings instead of or in addition to actual homes, although we have found the use of actual homes to be very practical and convenient.
- Scott/CHEERS: Robert's three points are very relevant and we agree with all his recommendations.

We appreciate this opportunity to participate in the HERS II proceeding and thank the Commission for considering our comments.

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