

DOCKETED

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Setting the Standards for
Home Energy Efficiency

April 18, 2023

Via Electronic Mail

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J. Andrew McAllister, Ph.D.
Commissioner
California Energy Commission
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RE: California RESNET Program Updates

Dear Commissioner McAllister and Executive Director Bohan:

This letter and accompanying data serve as a program update for the California RESNET Program that commenced in 2019 with the authorization from the California Energy Commission. The program was launched to assess how RESNET HERS® Index ratings could be used by California builders to market the energy efficiency of their homes.

Update Summary

- Market demand for a CA-RESNET HERS Index Score is evident and growing.
- Data for California homes issued a HERS Index Score during the 2019 Code Cycle is being shared with the CEC.
- CEC staffing and keeping up with software versioning have made updates to a CBECC-Res converter unfeasible.
- Program adjustments for the 2022 Code Cycle are being implemented to support California's production homebuilders and homebuyers while the current HERS Index calculator is based on the 2019 Code Cycle. As a not-for-profit organization, RESNET simply does not have the resources to keep up with the California Code Cycle software changes.

Background:

The movement behind the RESNET HERS Index project in California began as a collaborative effort between executive leadership at the California Energy Commission (CEC), the Western HVAC Performance Alliance (WHPA), national production builders, and the Residential Energy Services Network, Inc. (RESNET). The stakeholders



Setting the **Standards** for
Home Energy Efficiency

involved wanted to address a market demand from builders to promote and market the energy performance of newly constructed homes in California.

Martha Brook, along with other CEC officials, worked with industry stakeholders to assess the need for a RESNET HERS Index Score in California.¹ With the adoption of 2019 Code, which incorporated the 2006 IECC reference house, CEC engineers and subject matter experts identified an opportunity to use the 2019 CBECC-Res software to generate a RESNET HERS Index Score.

On May 30, 2019, As the RESNET Executive Director, I put forth a proposal to the CEC Executive Director, Drew Bohan and Commissioner McAllister to support a research program on RESNET HERS Index Ratings in California. The agreement was that RESNET would work with CEC approved Whole House Rating Providers to launch the program.

On June 19, 2019, Executive Director Bohan officially approved the proposal and the CA-RESNET HERS Index program was underway.

RESNET secured funding from its Board of Directors to support the program. Neal Kruis with Big Ladders Software and Scott Criswell with SAC Software Solutions were hired to develop and program a converter. The converter would take Title-24 energy calculations and additional inputs to generate a RESNET HERS Index score.²

CalCERTS, Inc., a CEC approved Whole House HERS Provider, supported the program by providing subject matter experts, engineers, programmers, and staff resources to build and launch the program.

By October 2020, the team released a beta version of the CA-RESNET HERS Index Score.

- The CEC's Building Standards Branch assisted with the release of the converter in conjunction with CBECC-Res version 2019.1.3.
- RESNET provided continued funding and support for technical assistance and programming.

¹ Drew Bohan (CEC), Dave Ashuckian (CEC), Christopher Meyer (CEC), Joe Loyer (CEC), Lea Haro (CEC), Jacob Atalla (KB Homes), Phillip Fairey (FSEC),

² Scott Criswell, a key programmer for the CEC's compliance tools, engaged in the project with the express understanding by all parties that work on the CA-RESNET HERS Index project would be prioritized second to any CEC programming deadlines. This promise was honored and complication with CBECC-RES updates impeded timely updates to the converter.



Setting the **Standards** for
Home Energy Efficiency

- CalCERTS completed the interface on the CalCERTS Registry to upload compliance files. The Registry was programmed to verify required inputs and program requirements.
- CalCERTS released specialized training for California HERS Raters responsible for verifying the score; and for Energy Consultants working with the compliance files. Within these trainings the differences between a California Whole House Score and the CA-RESNET HERS Index are addressed.

Commencement of the Program:

The release of the CA-RESNET HERS Index Score did not immediately register with California Rating companies. Although many companies participated in the training, there were concerns related to the viability of the program given the title. Rating Companies were uncertain as to whether they could properly staff and service a program that was characterized as a “pilot.” The name was adjusted to CA-RESNET and the term “pilot” was removed from the marketing.³

Rating companies working with California’s top production builders tested the conversion processes by running projects through the converter. Score adjustments were needed to correct modeling errors and discrepancies in the converter. Scores and analysis were shared with Neal Kruis and Scott Criswell to assess perceived differences. The conversion process was amended and equivalent scores to the national marketplace were finally confirmed; however, the converter coding continued to reside on the outdated version of CBECC-Res. As a result, Rating companies chose to generate scores outside of the CBECC-Res process to meet the marketplace demand and avoid the software versioning issues.

Changes in the Marketplace:

Changes in the demand for a CA-RESNET HERS Index have fundamentally changed since the start of the program in 2019. Rating firms have embraced the program because of the demand from builders. The national production builders working in California use a HERS Index Score for market-based opportunities and funding.

In August 2022, RESNET and CalCERTS met with the CEC’s Building Standards Branch and the Compliance Standards Branch to provide these updates. Following that meeting, RESNET Executive Director, Steve Baden, David Goldstein of NRDC’s Energy Programs, and Big Ladder Vice President, Neal Kruis, met with Commissioner McAllister, and Manager of the Building Standards Branch, Will Vicent, at the ACEEE

³ The commencement of the program also coincided with staffing issues related to disruptions in the marketplace due to COVID-19. Program name changes were shared with CEC leadership.



Setting the Standards for
Home Energy Efficiency

Summer Study Conference in Pacific Grove, California, to provide additional updates on the program. At that time, it was discussed that changes to the CEC approved software and versioning issues with CBECC-Res outpaced the ability of the Rating companies and production builders to adopt the program. CEC staffing issues and the frequency of the versioning of CBECC-Res made updates to the converter unfeasible. Production builders were moving forward with a CA-RESNET HERS Index Score to meet the market-based opportunities without use of the CBECC-Res converter.

Example of the market-based opportunities driving the demand include:

- **ESG Reporting:** Publicly traded homebuilders are using the RESNET HERS Index score for their Environmental Social Governance (ESG) reporting to investors and stockholders. The Sustainability Accounting Standards Board (SASB) has identified the HERS Index rating as the metric for reporting sustainability contributions to Wall Street. For these national homebuilders to have complete profiles, incorporating their California production builds, they must provide legitimate RESNET Index Score for each lot.
- **Mortgage Lender Incentives:** Builders and the mortgage market are using HERS Index Scores for green bonds. The secondary mortgage market giants of Freddie Mac and Fannie Mae offer incentives for homes with qualifying RESNET HERS Index Scores for the Green Mortgage Back Securities programs. The Freddie Mac incentive ranges from \$1,000 to \$2,000 per home. A CA-RESNET Index Score provides an avenue for homes in California to qualify. Fannie Mae and Freddie Mac require all homes participating in the program to be uploaded to the RESNET National Registry. This means that currently participation by California builders and mortgage lenders is severely constrained.

Included in this program update, RESNET and CalCERTS are providing a data set of all California homes with a verified HERS Index Score in California during the 2019 Code Cycle. Data includes information such as energy features, geographic area, and verified score. To keep the information protected, it is on a secured server and can be transmitted to the CEC with further guidance, through the CEC's protected servers. CalCERTS will reach out to Will Vicent with the Building Standards Branch directly to transmit the information.

Within this data set, the CEC will be able to assess and identify the increasing demand for a RESNET HERS Index Score in California. In addition, CEC will know what energy measures are being adopted to give the homes their RESNET HERS Index Scores.



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2022 Code Year Solution

In an effort to sustain the program and to provide the CEC with additional data for analysis, RESNET and CalCERTS are working with an accredited RESNET software provider to generate CA-RESNET HERS Index Scores. This will allow California builders to have their home included in incentive programs, rebates, green bond mortgage products and ESG reporting that are only available to a verified RESNET HERS Index Score.

Additionally, work will continue to assess the demand for a converter in conjunction with CBECC-Res and Title-24 calculation files. Information and data will continue to be supplied to the CEC through CalCERTS. It is recommended that CalCERTS meet with the Building Standards Branch to ensure only data and information that is useful to the CEC is shared.

An amended Memorandum of Agreement (MOA) between RESNET and CalCERTS was executed in relation to this program to ensure reporting to the CEC continues. A copy of the original and/or amended MOA can be shared upon request.

No aspects of the CA-RESNET program are utilized to substantiate compliance with California Building Energy Efficiency Standards or verify compliance with California's Energy Code. The program is restricted to allowing California builders to market their homes' energy performance and take advantage of national incentives through the CA-RESNET HERS Index.

We look forward to continued partnership on this program and will provide further updates throughout the year.

Sincerely,

A handwritten signature in blue ink that reads "Steve Baden".

Steve Baden
Executive Director

Cc:

Michael Sokol, Director Energy Division, California Energy Commission
Will Vicent, Manager, Building Standards Branch, California Energy Commission
Charlie Bachand, Chief Executive Office, CalCERTS, Inc.
Shelby Gatlin, Chief Operations Officer, CalCERTS, Inc.
Neal Kruis, Vice President, Big Ladder Software