

**STATE OF CALIFORNIA**  
**STATE ENERGY RESOURCES**  
**CONSERVATION AND DEVELOPMENT COMMISSION**

California Energy Commission

**DOCKETED**

**14-HERS-01**

**TN # 75274**

**MAR 04 2015**

**ORDER**

**WHEREAS** on February 9, 2015, the Executive Director of the State Energy Resources Conservation and Development Commission (California Energy Commission) provided his recommendation, attached hereto as "Exhibit A," to Energy Analysis & Comfort Solutions (EACS), Inc., that the Commission:

(1) certify EACS as a new Provider under the California Home Energy Rating System (HERS) Program, to administer the HERS Provider program for conducting Field Verification and Diagnostic Testing (FV & DT) for prescriptive Heating, Ventilation, and Air Conditioning (HVAC) alterations to existing residential buildings, as required by the 2013 Building Energy Efficiency Standards, pursuant to Public Resources Code, Section 25942, and California Code of Regulations, Title 20, Sections 1670 et seq., 1674, subd. (c); and

(2) certify EACS' data registry as it meets the requirements of a residential data registry in California Code of Regulations, Title 24, Part 6, Section 10-109 and Joint Reference Appendix JA7, of the 2013 Building Energy Efficiency Standards, and

**WHEREAS** the February 25, 2015, Business Meeting was the first available meeting, after the Executive Director provided his recommendation, for the Commission to consider this matter.

**NOW THEREFORE** the Commission confirms the Executive Director's findings and adopts his recommendation and:

(1) certifies EACS as a new HERS Provider to administer the EACS HERS Provider program for the FV & DT for residential prescriptive HVAC alterations to existing buildings as required by the 2013 Building Energy Efficiency Standards; and

(2) certifies EACS' data registry, as required by California Code of Regulations, Title 24, Part 6, Section 10-109 and Joint Reference Appendix JA7, of the 2013 Building Energy Efficiency Standards.

**IT IS SO ORDERED.**

CERTIFICATION

The undersigned Secretary to the Commission does hereby certify that the foregoing is a full, true and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on February 25, 2015.

AYE: Weisenmiller, Douglas, McAllister, Hochschild, Scott

NAY: None

ABSENT: None

ABSTAIN: None

  
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HARRIET KALLEMEYN  
Secretariat

# STATE OF CALIFORNIA

## Energy Resources Conservation And Development Commission

In the matter of,	)	<b>ORDER NO.: 15-0225-6</b>
	)	
Energy Analysis And Comfort Solutions, Inc.	)	EXECUTIVE DIRECTOR
(EACS) Application for (1) Certification as a	)	RECOMMENDATION TO
California Home Energy Rating System (HERS)	)	(1) CERTIFY EACS, AS
Provider for Field Verification and Diagnostic	)	A NEW HERS PROVIDER FOR
Testing on Residential Prescriptive HVAC	)	FIELD VERIFICATION
Alterations (2) Approval of the EACS Data	)	& DIAGNOSTIC TESTING
Registry under the HERS Regulations and the 2013	)	ON RESIDENTIAL
Building Energy Efficiency Standards	)	PRESCRIPTIVE HVAC
	)	ALTERATIONS AND (2)
.	)	APPROVE THE EACS DATA
	)	REGISTRY UNDER THE HERS
	)	REGULATIONS AND THE 2013
	)	BUILDING ENERGY EFFICIENCY
	)	STANDARDS
	)	
	)	FEBRUARY 9, 2015

### I. Executive Summary

The Warren-Alquist Act directs the California Energy Commission<sup>1</sup> to establish criteria for a statewide home energy rating system.<sup>2</sup> No home energy rating services may be performed in California unless they are certified according to the program established by the Commission.<sup>3</sup> The Commission's California Home Energy Rating System (HERS) Program regulations<sup>4</sup> establish requirements for home energy rating systems, for providers (including the providers' training and certification of raters), and for the Commission's certification of providers. The regulations define a provider as an organization that administers a California HERS Program.

The 2013 Building Energy Efficiency Standards (2013 Standards) require Field Verification and Diagnostic Testing (FV & DT) of specified residential energy-efficiency measures to demonstrate compliance, which must be performed by HERS Raters, certified by Commission-certified HERS Providers. Additionally, the 2013 Standards<sup>5</sup> impose requirements for data registries in order to be used for registration of compliance documentation required by the 2013 Standards.

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<sup>1</sup> Also known as the State Energy Resources Conservation and Development Commission. See Pub. Resources Code, § 25200. Unless otherwise noted, all subsequent statutory citations are to the Public Resources Code.

<sup>2</sup> § 25942, subd. (a).

<sup>3</sup> § 25942, subd. (c).

<sup>4</sup> Cal. Code Regs., tit. 20, §§ 1670-1675. Unless otherwise noted, all subsequent regulatory citations are to the Cal. Code Regs., tit. 20.

<sup>5</sup> Cal. Code Regs., tit. 24, pt. 6, and associated administrative regulations in pt. 1, ch. 10; Cal. Code Regs., tit. 24, pt. 1, ch. 10, § 10-109 [data registries].

**Executive Director Recommendation  
To Certify EACS**

Energy Analysis and Comfort Solutions, Inc. (EACS) has applied for certification as a California HERS Program provider, authorized to administer a California HERS Program overseeing HERS Raters conducting FV & DT for alterations to existing residential buildings<sup>6</sup> under the 2013 Standards. EACS has also applied for approval of its residential data registry under the 2013 Standards.

Based upon Staff's review of EACS' application, I recommend that the Energy Commission certify EACS as a California HERS Program provider, authorized to administer a California HERS Program overseeing HERS Raters conducting FV & DT for Residential Heating, Ventilation, and Air Conditioning (HVAC) Alterations under the 2013 Standards, and to approve the EACS HERS Data Registry as a residential data registry.

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<sup>6</sup> See § 1670(i) [field verification and diagnostic testing].

## **Executive Director Recommendation To Certify EACS**

### **II. Background**

EACS has applied to the Energy Commission for:

1. Certification of its California HERS Program under the HERS regulations, for demonstrating compliance with the 2013 Standards on Residential Prescriptive HVAC Alterations; and
2. Certification of its HERS Data Registry as a residential data registry under the 2013 Standards on Residential Prescriptive HVAC Alterations.

### **III. EACS Application Meets the Requirements for HERS Providers Under Sections 1672 through 1674**

EACS has submitted an application demonstrating that it meets the requirements established by HERS Regulations Sections 1672 through 1674 for FV & DT to show compliance with the 2013 Standards on Residential Prescriptive HVAC Alterations.

#### **A. EACS Application Includes the Required HERS Provider Program Documents**

As required by Section 1674(a)(1), EACS submitted a “complete copy of all rating procedures, manuals, handbooks, Rating System descriptions, and training materials.”

EACS’ application includes training materials tailored to instruction on the 2013 Standards compliance requirements and diagnostic testing procedures for alterations to existing buildings.

#### **B. EACS Application Meets the Applicable Requirements of Section 1672**

As required by Section 1674(a)(2), the EACS application includes a detailed explanation of how EACS’ Rating System for the HERS Raters it certifies meets the applicable requirements of Section 1672.

1. Section 1672(a): California Whole-House Home Energy Rating or California Home Energy Audit. A California Whole-House Home Energy Rating or a California Home Energy Audit shall be completed for a home only if the rating or audit is completed as specified by the HERS regulations and the HERS Technical Manual.<sup>7</sup>
2. Section 1672(b)(1): Data Collection. For ratings of existing homes that produce a California Whole-House Home Energy Rating or a California Home Energy Audit, each Rating System shall have documented procedures for site inspection and diagnostic testing of Energy-Rated Homes.

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<sup>7</sup> Publication CEC-700-2008-012, December 2008. See §§ 1670, 1671.

**Executive Director Recommendation  
To Certify EACS**

3. Section 1672(b)(2): Data Collection. For ratings of newly constructed homes that produce a California Whole-House Home Energy Rating, procedures for initial testing, sampling, resampling, and corrective action specified in the Residential Appendices to the 2013 Standards shall be followed.
4. Section 1672(b)(3): For ratings of newly constructed homes to establish compliance with the 2013 Standards, through field verification and diagnostic testing, data shall be collected as specified by the Residential Appendices to the 2013 Standards. A Rater who collects such data and performs such diagnostic tests shall be certified by the Provider as a California Field Verification and Diagnostic Testing Rater.
5. Section 1672(c): Data Analysis Requirements.
6. Section 1672(d): Energy Uses Rated.
7. Section 1672(e): On-Site Renewable Generation.
8. Section 1672(f): Rating Scale.
9. Section 1672(g): Method of Calculating TDV Energy.
10. Section 1672(h): Utility Bill Analysis.
11. Section 1672(i): Recommendations for Energy Efficiency Improvements.
12. Section 1672(j): Greenhouse Gas Emissions.
13. Section 1672(k): HERS Report

Sections 1672(a) through 1672(k) are not applicable in this situation, as these sections specifically address requirements for which EACS is not seeking approval.

14. Section 1672(l): Field Verification and Diagnostic Testing. The Provider and Rater shall provide FV & DT of energy efficiency improvements as a condition for those improvements to qualify for the 2013 Standards compliance credit, as required by the 2013 Standards and associated Reference Appendices.

EACS' application describes the appropriate oversight and quality assurance inspections of EACS-certified HERS Raters to ensure that these Raters are providing complete and accurate FV & DT as required by the 2013 Standards for alterations to existing buildings, including the associated Reference Appendices.

15. Section 1672(m): Provider and Rater Conduct and Responsibility. Providers and Raters shall not knowingly provide untrue, inaccurate, or incomplete rating information or report rating results that were not conducted in compliance with these regulations. Providers and Raters shall not knowingly accept payment or other consideration in exchange for reporting a rating result that was not in fact conducted and reported in compliance with these regulations.

In addition to the oversight and quality assurance inspections indicated under number 14, above, EACS' application requires all HERS Raters certified by EACS to agree to and sign Rater Agreements and Registry Agreements that explicitly state the conduct and responsibility requirements for EACS-certified HERS Raters.



**Executive Director Recommendation  
To Certify EACS**

**C. EACS' Application Meets The Applicable Requirements of Section 1673**

Section 1674(a)(3), requires the following detailed explanation of how each applicable part of Section 1673 is met by EACS.

1. Section 1673(a)(1): Each Provider's training program shall include classroom and field training of applicants for California Whole-House Home Energy Rater certifications, incorporating training in analysis, theory, and practical application in specified areas.
2. Section 1673(a)(2): California Home Energy Inspector applicants shall be required to be trained by the Provider in specified areas.
3. Section 1673(a)(3): California Home Energy Analysts applicants shall be required to be trained by the Provider in specified areas.

Sections 1673(a)(1) through 1673(a)(3) are not applicable in this situation, as these sections specifically address requirements for which EACS is not seeking approval.

4. Section 1673(a)(4): California Field Verification and Diagnostic Testing Raters . . . shall be required to receive specific training in Sections 1673(a)(1)(H) and (K) through (M) and general training in Sections 1673(a)(1)(A) to (G) and (P).

EACS' application complies with this section as it includes training materials for Rater certification for FV & DT for alterations to existing buildings. This curriculum sufficiently includes all of the content to provide classroom and field training and certification on the topics required in Section 1673(a)(1).

5. Section 1673(a)(5): The training for all certifications and Raters shall include thorough instruction in using the Provider's Rating System and database.

EACS' training curriculum includes thorough instruction on the use of the EACS Rating System and database. This includes, but is not limited to, instruction in the correct completion and registration of compliance documentation, the correct use of diagnostic testing equipment, description of conflict of interest provisions, HERS Rater ethics, and the correct use of the EACS Registry.

6. Section 1673(a)(6): The training shall require California Whole-House Home Energy Rater applicants to satisfactorily perform a rating for at least one home that includes field verification and diagnostic testing in the presence and under the direct supervision of the Provider's trainer or Quality Assurance Reviewer. The training shall require California Field Verification and Diagnostic Testing Rater applicants to satisfactorily perform FV & DT for at least one home in the presence and under the supervision of the Provider's trainer or Quality Assurance Reviewer. The Provider shall review and approve these ratings for accuracy and completeness.

## **Executive Director Recommendation To Certify EACS**

For this specific approval process, this section is only applicable to the quality assurance evaluation of Field Verification and Diagnostic Testing Rater applicants, and not Whole House Rater applicants. EACS has developed a Quality Assurance Program as required by Section 1673(i) and has a Quality Assurance Reviewer, who is a certified HERS Rater with extensive field experience to provide the quality assurance oversight of HERS raters conducting FV & DT.

7. Section 1673(a)(7): The Provider shall require each applicant to take an Energy Commission-approved written and practical test that demonstrates his or her competence in all subjects specified in Section 1673(a)(1). The Provider shall retain all results of these tests for five years from the date of the test.

EACS' application demonstrates compliance with this section as it includes Commission-approved training materials and tests for Rater certification for FV & DT for alterations to existing buildings.

8. Section 1673(a)(8): Each Provider may establish an Energy Commission-approved challenge test that evaluates competence in each area addressed by the Provider's training program.

EACS' application demonstrates compliance with this section as it includes Commission-approved training materials and tests for Rater certification for FV & DT for alterations to existing buildings.

9. Section 1673(a)(9): Programs incorporating Building Performance Contractors shall provide specific training in all areas specified in Section 1673(a)(1). These programs shall be submitted by the Provider for individual review and approval by the Energy Commission.

This section is not applicable in this situation, as this section specifically addresses requirements for which EACS is not seeking approval.

10. Section 1673(b): Rater Agreements. As a condition of Rater registry under Section 1673(d), each Provider shall ensure that a Rater applicant who has met the applicable requirements of Section 1673(a) has entered into an agreement with the Provider to provide home energy rating and FV & DT services in compliance with these regulations.

EACS has a Rater Agreement for the 2013 Standards which will be required to be signed by all EACS-certified raters once EACS obtains Energy Commission approval of its California HERS Program.

11. Section 1673(c): Building Performance Contractor Agreements.

This section is not applicable in this situation, as this section specifically addresses requirements for which EACS is not seeking approval.

12. Section 1673(d): Rater and Building Performance Contractor Registry.



## **Executive Director Recommendation To Certify EACS**

EACS is required to ensure that its Raters meet all applicable requirements of Sections 1673(a) and 1673(b). EACS' application includes a training curriculum as required by Section 1673(a) and Rater Agreements as required by Section 1673(b).

### **13. Section 1673(e): Data Maintenance.**

The application shows that the database, web-based interface, and reporting functionality developed by EACS fulfill all of the data retention requirements of Section 1673(e). Per these requirements, data will be retained for a minimum of ten (10) years.

### **14. Section 1673(f): Field Verification and Diagnostic Testing Evaluation.**

The application shows that the database, web-based interface, and reporting functionality developed by EACS addresses all of the data retention requirements of Section 1673(e)(2) for a minimum of 10 percent of a random sampling of homes actually field verified and diagnostically tested annually, or 500 such homes annually, whichever is less. EACS will provide this information to the Commission annually.

### **15. Section 1673(g): Data Submittal. Upon the Energy Commission's request, but not more frequently than annually, a Provider shall submit to the Energy Commission information recorded pursuant to Section 1673(e) and provide the Energy Commission ongoing access to the Provider's database.**

The application shows that EACS will submit to the Energy Commission the information collected pursuant to Section 1673(e) and will provide the Energy Commission with ongoing access to the database maintained pursuant to that section.

### **16. Section 1673(h): Training Materials Retention. Each Provider shall retain for at least five years after the last date they are used, at least one copy of all materials used to train Raters.**

The application shows that EACS will retain, for at least five years after the date they are used, at least one copy of all materials used to train Raters.

### **17. Section 1673(i): Quality Assurance. Each Provider shall have a quality assurance program meeting the required elements.**

EACS' application shows that it has developed a Quality Assurance Program that meets the requirements of Section 1673(i) and has a designated Quality Assurance Manager and a staff of Quality Assurance Reviewers, all of whom are experienced HERS Raters. EACS has also developed a Complaint Response System in accordance with the requirements of Section 1673(i)(5).

### **18. Section 1673(j): Conflict of Interest.**

## Executive Director Recommendation To Certify EACS

The HERS regulations require that Providers be “independent entities” from Raters. Section 1673(j), states:

- (1) Providers shall be independent entities from Raters.
- (2) Providers and Raters shall be independent entities from the builder and from the subcontractor installer of energy efficiency improvements field verified or diagnostically tested.
- (3) Providers and Raters shall be independent entities from any firm or person that performs work on the home for a California Home Energy Audit or a California Whole-House Home Energy Rating.<sup>8</sup>

Section 1671 defines “independent entity” and “financial interest” as follows:

*Independent Entity* means having no financial interest in, and not advocating or recommending the use of any product or service as a means of gaining increased business with, firms or persons specified in Section 1673(j).

*Financial Interest* means an ownership interest, debt agreement, or employer/employee relationship.<sup>9</sup>

In the application, EACS acknowledges and fully supports the conflict-of-interest rules and states it will comply with the requirements of Section 1673(j).

19. Section 1673(k): Improvement Measures Cost Database. Each Provider shall develop and maintain a database of the cost of implementing the efficiency improvement measures specified in the HERS Technical Manual. The database shall contain statewide standardized cost values and regional adjustment factors.

This section is not applicable in this situation, as this section specifically addresses requirements for which EACS is not seeking approval.

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<sup>8</sup> §1673(j)(3) exempts raters who are working as or for a Building Performance Contractor approved as specified in §1674(e) of the regulations and in the HERS Technical Manual, from being independent entities from firms or persons working on the home. This exception does not apply to California Field Verification and Diagnostic Testing Raters performing field verification and diagnostic testing of newly-constructed homes or alterations to existing homes to verify compliance with the requirements of the Building Energy Efficiency Standards.

<sup>9</sup> Financial interest does not include ownership of less than five percent of the outstanding equity securities of a publicly traded corporation. § 1671.

**Executive Director Recommendation  
To Certify EACS**

**D. EACS Contact Information**

EACs, Inc.  
T.W. Max McKinney  
P.O. Box 2233  
6343 Beech Avenue,  
Orangevale, CA95662

**E. Articles of Incorporation and By-Laws Provided**

In the application, EACS has provided its articles of incorporation and by-laws.

**F. Identification of EACS' Owners, Parents, Subsidiaries, and Affiliates.**

In the application, EACS has identified its owner and president as Max McKinney.

**G. Statement of Accuracy**

The application shows that EACS has stated that ratings are accurate, consistent, and uniform. The other requirements of Section 1674(a)(8), regarding utility bill estimates and recommendations on cost-effective energy-efficiency-improvement measures are not applicable to this application.

**H. Statement of Compliance**

The application shows that EACS has stated that it understands and will not knowingly fail to comply with the requirements of these regulations.

**I. Declaration of Veracity**

EACS has certified under penalty of perjury that all statements in the application are true.

**IV. EACS' Residential Data Registry Meets the Applicable Requirements**

As described below, EACS' application demonstrates that its HERS Data Registry meets the requirements of a residential data registry in section 10-109 and Joint Reference Appendix JA7, of the 2013 Standards.

**A. EACS' Application Meets the Applicable Requirements of Section 10-109**

Section 10-109 requires residential data registries to provide for registration, when required by the 2013 Standards of all residential compliance documentation and the nonresidential Certificates of Verification.

**Executive Director Recommendation  
To Certify EACS**

EACS' application demonstrates compliance with compliance documentation necessary to meet the 2013 Standards for residential alterations.

**B. EACS's Application Meets the Applicable Requirements of Reference Joint Appendix JA7**

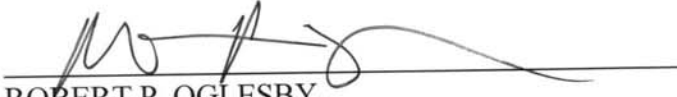
Contingent upon approval of a document repository by the Energy Commission, Reference Joint Appendix JA7 requires export of a copy of the registered compliance document to the Commission Document Repository. The export consists of an XML file which is validated against an XML schema.

EACS' application demonstrates compliance with XML validation for Alterations forms.

**V. Conclusion**

After considering the application, I find that EACS meets the requirements described above for Providers for FV & DT for alterations to existing buildings as required by the 2013 Standards, California Code of Regulations, Title 24, Part 6, and associated administrative regulations in Part 1, Chapter 10, and the California HERS Program regulations, Title 20, Section 1670 et seq., including but not limited to the applicable provisions in Sections 1672 and 1673.

Accordingly, I recommend that the Energy Commission confirm these findings and certify EACS as a California HERS Program provider for FV & DT for alterations to existing buildings and the EACS HERS Data Registry as a residential data registry.

  
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ROBERT P. OGLESBY  
Executive Director  
California Energy Commission

2-17-15 \_\_\_\_\_  
Date