

DOCKETED

Docket Number:	22-HERS-02
Project Title:	2022 Field Verification and Diagnostic Testing OIR Proceeding
TN #:	246779
Document Title:	Draft Staff Report - 2022 Update of the Home Energy Rating System Requirements
Description:	N/A
Filer:	Joe Loyer
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/25/2022 10:24:05 AM
Docketed Date:	10/25/2022



**CALIFORNIA
ENERGY COMMISSION**



**CALIFORNIA
NATURAL
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California Energy Commission

DRAFT STAFF REPORT

2022 Update of the Home Energy Rating System Requirements

**California Code of Regulations Title 20,
Division 2, Chapter 4, Article 8, Sections
1670–1675**

October 2022 | CEC-400-2022-017-SD

California Energy Commission

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ACKNOWLEDGMENTS

This report is the result of several years of investigations, public meetings, and focused research into the performance of the California Home Energy Ratings System program and field verification and diagnostic testing. The current authors would like to acknowledge the important contributions of individuals who were at one time members of the staff team conducting this work. The following individuals contributed to the early development of this report and the order instituting an informational proceeding (Order Number 12-1114-6):

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ABSTRACT

The Home Energy Rating System (HERS) regulations (Title 20, the California Code of Regulations, sections 1670-1675) establish a Whole House Rating program, which is a voluntary home energy usage rating program that provides efficiency upgrade recommendations to improve the home rating. The HERS program utilizes HERS Providers and HERS Raters. HERS Providers certify, train, and oversee HERS Raters. HERS Raters perform the whole-house ratings.

Another program, the Field Verification and Diagnostic Testing program, also utilizes HERS Providers and Raters. The Field Verification and Diagnostic Testing program is a mandatory administrative program used to collect data and verify compliance with the Building Energy Efficiency Standards (Energy Code) located in Title 24, Parts 1 and 6 of the California Code of Regulations.

As this staff report presents, the overlap of the Whole House Rating program and Field Verification and Diagnostic Testing program has made Energy Code compliance difficult and confusing for stakeholders; and management of the HERS program challenging for the California Energy Commission (CEC). As a result, the CEC is proposing to add all aspects of the Field Verification and Diagnostic Testing program requirements to Title 24 of the California Code of Regulations. Correspondingly, this report proposes to remove any provisions relevant to the Field Verification and Diagnostic Testing program from Title 20 of the HERS regulations.

Keywords: Field verification and diagnostic testing, ratings, Home Energy Rating System, raters, providers

Loyer, Joe. October 2022. *2022 Update of the Field Verification and Diagnostic Testing, Home Energy Rating System Requirements*. California Energy Commission. Publication Number: CEC-400-2022-017-SD.

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EXECUTIVE SUMMARY

The Warren-Alquist Act, Public Resources Code, sections 25000 *et seq.*, establishes the California Energy Commission (CEC) as the state's primary energy policy and planning agency. Section 25007 of the Act directs the CEC to "employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals." One of these measures was the development of a program to provide estimates of potential utility bill savings, and reliable recommendations on cost-effective ways to improve home energy efficiency, known as the Whole House Rating program. Another measure was the development of energy standards for newly constructed buildings, additions to existing buildings, and alterations to existing buildings, known as the Building Energy Efficiency Standards or the Energy Code.

The CEC promulgated regulations for the Home Energy Rating System (HERS) program in sections 1670-1675 of Title 20 of the California Code of Regulations. The regulations established requirements for the Whole-House Home Energy Ratings program as well as requirements for the Field Verification and Diagnostic Testing program.

The Whole-House Home Energy Ratings program is voluntary and provides efficiency upgrade recommendations to improve a home's energy rating. The HERS program utilizes HERS Providers and HERS Raters. The Field Verification and Diagnostic Testing program is a mandatory administrative program to verify compliance with the Energy Code and collect compliance data. Both services use HERS Providers and HERS Raters. HERS Providers certify, train, and oversee HERS Raters, who perform the ratings, verification, and testing.

The inclusion of certain field verification and diagnostic testing provisions in the HERS program regulations has made compliance with the Energy Code difficult and confusing for stakeholders; and management of the Whole-House Home Energy Rating program and Field Verification and Diagnostic Testing program challenging for the CEC. For these reasons, the CEC will conduct a rulemaking to add all aspects of the Field Verification and Diagnostic Testing program requirements to Title 24 of the California Code of Regulations. This would unify the administrative function of Energy Code compliance with the substantive standards in the Energy Code. As a result, this report proposes to remove all provisions relating to the Field Verification and Diagnostic Testing program from the HERS regulations, in order to avoid duplicative and potentially conflicting regulations existing in Title 20

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CHAPTER 1:

Legislative Criteria

Public Resources Code section 25942 directs the California Energy Commission (CEC) to “establish criteria for adopting a statewide home energy rating program for residential dwellings.” The statute further directs the CEC to include the following as part of the program criteria:

- (1) Consistent, accurate, and uniform ratings based on a single statewide rating scale;
- (2) Reasonable estimates of potential utility bill savings, and reliable recommendations on cost-effective measures to improve energy efficiency;
- (3) Training and certification procedures for home raters and quality assurance procedures to promote accurate ratings and to protect consumers;
- (4) In coordination with home energy rating service organization databases, procedures to establish a centralized, publicly accessible, database that includes a uniform reporting system for information on residential dwellings, excluding proprietary information, needed to facilitate the program. There shall be no public access to information in the database concerning specific dwellings without the owner’s or occupant’s permission; and
- (5) Labeling procedures that will meet the needs of home buyers, homeowners, renters, the real estate industry, and mortgage lenders with an interest in home energy ratings.

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CHAPTER 2:

Efficiency Policies

The Warren-Alquist Act establishes the CEC as the state’s primary energy policy and planning agency.¹ The act directs the CEC to “employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals.”² As part of accomplishing this mandate, the act mandates the CEC to promulgate energy standards for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The Energy Code is a unique California asset that has placed the state on the forefront of energy efficiency, sustainability, energy independence, and climate change issues and has provided a template for national standards within the United States as well as for other countries around the globe.

The following legislation and executive orders are relevant to program objectives.

Assembly Bill 32 (Nuñez, Chapter 488, Statutes of 2006)

The landmark Global Warming Solutions Act of 2006 established a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. Assembly Bill (AB) 32 made the following legislative findings:

- (a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.
- (b) Global warming will increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.
- (c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including energy efficiency requirements. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases.
- (d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.
- (e) By exercising a global leadership role, California will benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving the

1 The [Warren-Alquist State Energy Resources Conservation and Development Act, Division 15 of the Public Resources Code, sections 25000 et seq.](https://www.energy.ca.gov/rules-and-regulations/warren-alquist-act), available at <https://www.energy.ca.gov/rules-and-regulations/warren-alquist-act>.

2 Public Resources Code section 25007.

2020 statewide limit on emissions of greenhouse gases established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases.

Assembly Bill 758 (Skinner, Chapter 470, Statutes 2009)

AB 758 requires the CEC to establish a comprehensive program to achieve greater energy savings in the state's residential and nonresidential building stock.

Senate Bill 350 (De León, Chapter 547, Statutes of 2015)

Senate Bill (SB) 350 was approved by former Governor Edmund G. Brown Jr. as a call for a new set of objectives in clean energy, clean air, and pollution reduction for 2030 and beyond. These objectives include doubling the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. The Legislature expressed its intent in enacting SB 350 to codify the targets to ensure they are permanent, enforceable, and quantifiable. SB 350 also directs the CEC to "adopt, implement, and enforce a responsible contractor policy for use across all ratepayer-funded energy efficiency programs that involve installation or maintenance, or both installation and maintenance, by building contractors to ensure that retrofits meet high-quality performance standards and reduce energy savings lost or foregone due to poor-quality workmanship" (Public Resources Code section 25943[a])[3]). The CEC will also establish consumer protection guidelines for energy efficiency products and services (Public Resources Code section 25943[a])[4]).

SB 350 calls for major changes in achieving rapid greenhouse gas reductions through building energy efficiency. SB 350 recognizes that a major handicap to achieving that reduction is the energy savings lost or foregone due to poor-quality work resulting from contractors failing to meet minimum Energy Code and performance standards governing installations of energy efficiency measures.

Senate Bill 32 (Pavley, Chapter 249, Statutes of 2016)

SB 32 updated the Global Warming Solutions Act of 2006 to reduce the state's greenhouse gas emissions to 40 percent below 1990 levels by 2030.

Assembly Bill 3232 (Friedman, Chapter 373, Statutes of 2018)

The findings of the Legislature in AB 3232 make clear the importance of effective building energy savings and include the following:

- Buildings are responsible for 25 percent of all emissions of greenhouse gases.
- Decarbonizing California's buildings is essential to achieve the state's greenhouse gas emission reduction goals at the lowest possible cost.

AB 3232 stated the intention of the Legislature is to achieve significant reductions in greenhouse gas emissions by the state's residential and commercial building stock. The law directs the CEC to, in consultation with the California Public Utilities Commission (CPUC), the California Air Resources Board (CARB), and the California Independent System Operator

(CAISO), assess the state’s potential for reducing greenhouse gas emissions in its residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. ³

Executive Order B-55-18 (Brown, 2018)

This executive order established California’s principal climate change directive to achieve carbon neutrality in all sectors of the state as soon as possible, and no later than 2045, and to maintain and achieve negative emissions thereafter.

Executive Order N-19-19 (Newsom, 2019)

This executive order called for a concerted commitment and partnership by government, the private sector, and California residents to reach some of the strongest climate goals in the world and required every aspect of state government to redouble its efforts to reduce greenhouse gas emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy.

3 Kenney, Michael, Nicholas Janusch, Ingrid Neumann, and Mike Jaske. 2021. [California Building Decarbonization Assessment](https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment). California Energy Commission. Publication Number: CEC-400-2021-006-CMF. <https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment>.

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CHAPTER 3:

Background on the HERS Program

Program Development

Beginning in the latter part of the 1980s, concerns had been raised regarding construction and installation defects of energy efficient equipment. For example, field research conducted by Lawrence Berkeley National Laboratory (LBNL) in 1989 demonstrated major inadequacies in the design, installation, and sealing of heating and air-conditioning ducts that, conservatively, wasted 30 to 40 percent of the conditioned air of a home, severely impairing the energy efficiency of heating and air-conditioning equipment.⁴ A third-party approach was proposed because the Field Verification & Diagnostic Testing (FV&DT) was beyond the resources of local building departments.⁵ Also, numerous studies and technical papers published between 1990 and 1998, many of them focused on California, demonstrated that improvement in the installation of central air conditioners and heat pumps would have major positive impacts on energy efficiency, and would also provide non-energy benefits, such as improved comfort, reduced maintenance costs, and longer equipment life.⁶ These studies concluded that installation quality improvements could achieve approximately 30 to 40 percent energy savings and 15 to 30 percent peak demand savings, reducing consumer energy bills accordingly.⁷

In the 1990s, Public Resources Code section 25942 directed the CEC to develop and implement a Home Energy Rating and Labeling program (Home Energy Rating System or HERS) to assist homebuyers and others in understanding the energy performance and potential of their homes. Starting in 1995, the CEC began developing the HERS program seeking to establish basic administrative procedures and a “whole-house” rating system. In that same time period, construction defect litigation related to many different construction characteristics became a major problem for California builders, resulting in liability insurance becoming extremely expensive or unavailable, and causing a major downturn in construction

4 Modera, M. P., et al. 1989. “[Residential Duct System Leakage: Magnitude, Impacts, and Potential for Reduction](https://www.aivc.org/sites/default/files/airbase_3618.pdf).” Lawrence Berkeley National Laboratory, VA-89-5-5, https://www.aivc.org/sites/default/files/airbase_3618.pdf.

5 Based on original findings of the HERS rulemaking in 1998.

6 Proctor, John, Chris Neme, and Steve Nadel. 1999. National Energy Savings Potential from Addressing Residential HVAC Installation Problems, p 21. <https://www.proctoreng.com/dnld/NationalEnergySavingsPotentialfromAddressingResidentialHVACInstallationProblems.pdf> (citing, among other studies, Hammarlund, Jeff et al., “Enhancing the Performance of HVAC and Distribution Systems in Residential New Construction”, Proceedings of 1992 ACEEE Summer Study on Energy Efficiency in Buildings, Volume 2, pp. 85-87, Proctor, John, “Pacific Gas and Electric Appliance Doctor Pilot Project”, Final Report Summer 1990 Activity, January 8, 1991, and Proctor, John and Ronald Pernick, 1992a, “Getting It Right the Second Time: Measured Savings and Peak Reduction from Duct and Appliance Repairs”, Proceedings of 1992 ACEEE Summer Study on Energy Efficiency in Buildings, Volume 2, pp. 217-224.)

7 Ibid at p. 16.

for multifamily housing.⁸ A major remedy that was proposed for reducing litigation problems was the use of third-party inspectors to ensure construction defects were avoided or corrected.⁹

The California Building Industry Association strongly advocated that the HERS program be used to establish a third-party verification process to check that those energy efficiency measures that are prone to construction/installation defects do not waste energy. A third-party approach was necessary because the cost of the test equipment and the time required to use it to verify quality performance were beyond the resources of local building departments to conduct. This approach was also supported by the California Building Officials (CALBO), the statewide building official organization that promotes public health and safety in building construction through responsible building code development.

The CEC developed the HERS program using raters for two key services:¹⁰ (1) FV&DT consistent with the California Building Energy Efficiency Standards, Title 24, Parts 1 and 6 and (2) Whole-House Home Energy Ratings of newly constructed and existing homes. The CEC established regulations for the Home Energy Rating System program in two phases: Phase I was to establish the Field Verification and Diagnostic Testing program. Phase II was to establish the Whole-House Home Energy Ratings Program.

In 1999, CEC promulgated the Phase I regulations in the California Code of Regulations, Title 20, sections 1670 *et seq.* The regulations fully addressed the Field Verification and Diagnostic Testing program, but also developed administrative requirements that could be used for the Whole-House Energy Ratings program, that would come later in Phase II. In 2009, the CEC adopted the Phase II regulations for Whole-House Home Energy Ratings, amending and extending the Phase I regulations.¹¹

Because of the concerns over the serious design and installation defects found through field research, the CEC included FV&DT provisions in its HERS program to help ensure consumers receive the energy savings they expected from their investments in energy efficiency measures. The Energy Code compliance program uses the providers and raters of the HERS program as provided for in Title 20, sections 1670 *et seq.*

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- 8 California Building Industry Association. SB 800 The Homebuilder, "FIX IT" Construction Dispute Resolution Law. 2003 http://paladinriskmanagement.com/wp-content/paladindocs/6_may_09_g000035.pdf, Kroll, Cynthia et. al., The Impact of Construction-Defect Litigation on Condominium Development, Cal. Policy Research Center Brief Vol. 14, No. 7 October 2002, University of California, p. 2, https://www.novoco.com/sites/default/files/atoms/files/defect_litigation_effects.pdf, San Diego Association of Governments, 2001, Condominium Construction Defect Litigation and Affordable Housing p. 6, https://www.sandag.org/uploads/publicationid/publicationid_146_576.pdf.
- 9 California Building Industry Association. SB 800 The Homebuilder, "FIX IT" Construction Dispute Resolution Law. 2003 http://paladinriskmanagement.com/wp-content/paladindocs/6_may_09_g000035.pdf.
- 10 California Energy Commission. Initial Statement of Reasons. California Home Energy Rating System. February 2, 1999.
- 11 [Whole-house Home Energy Rating System Program Initial Statement of Reasons](https://efiling.energy.ca.gov/GetDocument.aspx?tn=48236&DocumentContentId=36873)
<https://efiling.energy.ca.gov/GetDocument.aspx?tn=48236&DocumentContentId=36873>

Program Concerns

As currently implemented, the HERS program regulations seek to achieve two different goals between the Whole House and FV&DT programs. The Whole House program seeks to educate and advise consumers on energy efficiency measures to improve the energy consumption of their home. The FV&DT program verifies compliance with the Energy Code in newly constructed projects and some home improvement projects in existing homes.

Since the goals differ greatly, the use of the common regulations is not the most effective approach. The Whole House program is intended not to verify compliance with the Energy Code, but to give homeowners a perspective on the performance of their home. The FV&DT program must address an ever-changing landscape of energy efficiency measures adopted into updates to the Energy Code. This task is difficult to accomplish with a portion of the FV&DT program regulations combined with HERS program in the Title 20 regulations. Further, there are other issues specifically related to the FV&DT program the CEC intends to address separate to this proposal.¹²

12 This report focuses solely on separating the Whole House and FV&DT programs by moving the FV&DT program into the Energy Code. Specific issues and concerns regarding the current FV&DT program are addressed separately in the Title 24 FV&DT Rulemaking draft staff report.

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CHAPTER 4:

Staff Proposal for Regulatory Framework

Goals for Program Rulemaking

The CEC’s goal for this rulemaking is to remove the FV&DT program from the HERS regulations to avoid duplication and confusion for stakeholders and the CEC. This rulemaking coincides with a second rulemaking that, among other changes, consolidates FV&DT administrative requirements related to Energy Code compliance with the substantive standards in Title 24 of the Energy Code.

To accomplish this goal, this rulemaking proposes changes to Title 20, sections 1670–1675. The proposed changes remove all regulations related to the FV&DT program and keeps all other existing regulations related to the HERS program in Title 20. This would create two independent programs that are each tailored to support a single key purpose and service.

Staff Proposal

The proposed amendments to the Title 20 regulations will repeal FD&VT requirements in Title 20 effective January 1, 2026. Staff proposes a separate rulemaking to relocate all FD&VT requirements located in Title 20 into Title 24 effective January 1, 2026. This rulemaking will address only the changes to the HERS regulations (Title 20, sections 1670–1675).

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CHAPTER 5:

Alternatives Considered

Listed below are four options to address the issues in the HERS program:

1. Do nothing.
2. Reimagine the entire HERS program.

Option 1: Do Nothing

This approach is the least desirable option because it leaves the current regulations in place without addressing the issues identified in this staff report, including leaving regulations that are duplicative and potentially conflict with regulations in the Energy Code. Staff does not recommend this option.

Option 2: Reimagine the HERS Program

The only other option would be to move the major components of the HERS program dealing with the FV&DT elements into the Energy Code. Additionally, investigating the feasibility of altering the existing structure of the HERS program in one or more ways. One potential method of reimagining the HERS program would be to remove some functions, such as most quality assurance functions from HERS providers, or requiring that other services, such as compliance document processing through a registry, be done without charge as part of the rater agreements. For example, HERS program quality assurance functions could be delegated to independent third-party quality assurance providers that would need to be approved by the CEC and paid for by the providers. This change would align the HERS program more closely with the Residential Energy Services Network (RESNET) quality assurance program design.¹³

The major benefit of this option would be to ensure that all program elements meet the expected performance standards. A significant disadvantage of this approach is unknown increases in complexity in the regulations, and the number of entities to be regulated. Another drawback to this approach is the need for a complex rulemaking, which would require a substantial amount of staff time and resources. Staff is currently devoting a substantial amount of time and resources to a rulemaking adding regulations related to the FV&DT program to the Energy Code. As such, staff does not recommend this option at this time.

13 RESNET is a recognized oversight body for building energy efficiency rating and certification. RESNET are is recognized by several federal government agencies (including the Internal Revenue Service, the U.S. Environmental Protection Agency, and U.S. Department of Energy), builders, contractors, and industry organizations. Unlike the FV&DT program, which uses a single entity (the HERS provider) to train and oversee raters, RESNET create established two kinds of providers: quality assurance providers and rating providers. Quality assurance providers perform the quality assurance checks on the raters. The rating providers certify new raters and conduct other oversight of the raters they certify.

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CHAPTER 6: Technical Feasibility

This proposal regarding Title 20 provisions related to FV&DT are primarily organizational changes. Staff concludes that the proposed changes are technically feasible.

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CHAPTER 7: Savings and Cost Analysis

CEC staff proposes to remove requirements in Title 20, sections 1670 through 1675 related to the FV&DT program as those requirements will be placed into the Energy Code effective January 1, 2026. Removing the requirements related to the FV&DT program is not intended to have any savings or cost impacts on any stakeholder.

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CHAPTER 8:

Environmental Impact Analysis

Adverse Impacts

The proposal to separate the Whole-House Home Energy Ratings and FV&DT programs does not affect the energy efficiency measures required by the Energy Code. The proposed changes would not cause additional waste and because of program efficiency improvements could slightly reduce waste of energy and costs from inferior installations of heating, ventilation, and air conditioning (HVAC) and other energy-using residential equipment. The proposed changes do not require the use of any specific materials to improve the efficiency and do not require any further implementation of energy efficiency requirements, as the savings come from improving installation of already-required energy efficiency measures for consumers.

Beneficial Impacts

The proposal to separate the Whole-House Home Energy Ratings and FV&DT programs will benefit consumers and other stakeholders by clarifying the requirements of both programs, ensuring more timely updating of these regulations, and providing more appropriate administrative structures for the different programs.

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CHAPTER 9:

Economic and Fiscal Impacts

This chapter evaluates the statewide economic and fiscal impacts as a result of the proposed changes to the HERS regulations. The analysis considers impacts to jobs, the creation or elimination of businesses, advantages or disadvantages to businesses, incentives for investment in California, incentives for innovative products, and benefits to health, safety, and welfare of California residents, as well as agencies and businesses.

Based on available information, the proposed changes to separate the Whole-House Home Energy Ratings and FV&DT programs will not affect the job market, businesses, incentives, health, safety, or welfare of California residents, agencies, businesses, or any other stakeholder. Based on the evaluation of available information, neither the costs nor benefits associated with the proposed changes will exceed \$50 million.

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CHAPTER 10:

Consumer Equity

Energy equity encompasses the equitable access to the benefits of energy infrastructure and equitable access to resources for energy improvement. This chapter discusses the economic and environmental benefits to low-income households and disadvantaged communities as a result of the proposal to separate the Whole-House Home Energy Ratings and FV&DT programs.

These programs are statewide programs that provide energy efficiency ratings and protect consumers (homeowner and ratepayers) from poor construction and installation practices common in the housing construction market. For low-income and disadvantaged consumers, getting the most out of their investments in residential energy efficiency measures is extremely important. A 2016 study prepared with National Resources Defense Council (NRDC) support shows that low-income households in some of the largest California metropolitan areas spend, on average, 7.2 percent of their income for energy. That amount is more than double the national median of 3.5 percent.¹⁴ The report also shows that on average these low-income households paid a three times greater percentage of their income on utility bills than higher income households.

The proposal to separate the Whole-House Home Energy Ratings and FV&DT programs is to avoid confusion and consolidate Energy Code requirements and thereby improve both programs, so that consumers receive the energy savings they expected from their investments in energy efficiency measures.

14 Stamas, Maria. National Resources Defense Council, Inc. April 22, 2016. "[California's Low Income Face a Disproportionate Energy Burden, but Efficiency Can Reduce It](https://www.nrdc.org/experts/maria-stamas/californias-low-income-face-disproportionate-energy-burden-their-better-showing), <https://www.nrdc.org/experts/maria-stamas/californias-low-income-face-disproportionate-energy-burden-their-better-showing>.

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ACRONYMS AND DEFINITIONS

Acronym/Term	Description/Definition
AB 3232	<p>Zero-emissions buildings and sources of heat energy.</p> <p>This bill required the CEC, by January 1, 2021, to assess the potential for the state to reduce the emissions of greenhouse gases from the state’s residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. The bill required the CEC to include in the 2021 edition of the <i>Integrated Energy Policy Report</i> and all subsequent integrated energy policy reports a report on the emissions of greenhouse gases associated with the supply of energy to residential and commercial buildings.</p>
AHJ	<p>Authority Having Jurisdiction</p> <p>AHJs have the authority to issue building permits, perform building inspections, issue building citations, and issue certificates of occupancy. They are generally county, city, town building departments, but may include state agencies as well.</p>
ASHRAE	<p>American Society of Heating, Refrigerating and Air-Conditioning Engineers. ASHRAE is a professional association that seek to advance heating, ventilation, air conditioning and refrigeration (HVAC&R) systems design and construction through research, education programs and technical standards.</p>
CALBO	<p>California Building Officials. CALBO is a nonprofit corporation dedicated to promoting public health and safety in building construction through responsible legislation, education, and building code development.</p>
CBIA	<p>The California Building Industry Association is a statewide trade association based in Sacramento representing member companies including homebuilders, trade contractors, architects, engineers, designers, suppliers, and industry professionals in the homebuilding, multifamily, and mixed-use development markets.</p>
Title 24	<p>Title 24 of the California Code of Regulations is the California Building Standards Code. Title 24 is separated into 12 parts (Parts 1-12) that address components or issues regarding construction of building projects (both newly constructed buildings and additions or alterations to existing buildings). Title 24, Part 6, includes the building energy efficiency requirements for California.</p>

Acronym/Term	Description/Definition
Title 20, sections 1670–1675	Sections 1670-1675 of Title 20 of the California Code of Regulations are known as the HERS Regulations. These were developed beginning in the 1990s with the construction industry and other stakeholders to help address poor-quality HVAC installations and whole-house energy ratings.
CEC	<p>California Energy Commission</p> <p>The CEC is leading the state to a 100 percent clean energy future for all. As the state's primary energy policy and planning agency, the CEC is committed to reducing energy costs and environmental impacts of energy use while ensuring a safe, resilient, and reliable supply of energy.</p>
CPUC	The California Public Utilities Commission is a state agency that regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises.
Energy Code	California Energy Code (also known as the California Building Energy Efficiency Standards), is Title 24, Part 6, a part of the California Building Standards Code, Title 24.
FV&DT	<p>Field Verification and Diagnostic Testing</p> <p>Tests performed and registered by raters in the provider data registry following the prescribed procedures in the Title 24, Part 6, Residential Appendices (RA1-4).</p>
HERS	<p>Home Energy Rating System</p> <p>The California Home Energy Rating System (HERS) Program is described in Title 20, Chapter 4, Article 8, section 1670. The HERS program regulates providers that train and certify raters to perform whole-house ratings and FV&DT as a third-party to the contractor on a construction project. The providers and raters are responsible for registering the testing results in the provider's data registry.</p>
HVAC	Heating, ventilation, and air conditioning is the use of various technologies to control the temperature, humidity, and purity of the air in an enclosed space. The goal is to provide thermal comfort and acceptable indoor air quality.
LBNL	Lawrence Berkeley National Laboratory develops science and technology solutions for the world by bringing together multidisciplinary teams of researchers and creating tools for scientific discovery.

Acronym/Term	Description/Definition
SB 350	Clean Energy and Pollution Reduction Act of 2015 (De León, Chapter 547, Statutes of 2015). Enacted due to Governor Edmund G. Brown Jr.'s call for a new set of objectives in clean energy, clean air, and pollution reduction for 2030 and beyond.

Source: California Energy Commission

APPENDIX A:

Proposed Regulatory Language

In the following text, proposed additions to Title 20, section 1670-1675 are indicated by underline and proposed deletions are indicated by strikethrough.

§ 1670 - Scope

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

These regulations establish the California Home Energy Rating System (herein referred to as HERS) Program pursuant to Public Resources Code Section 25942, including procedures for the training and certification of Raters, and a certification program for home energy rating system organizations (herein referred to as Providers) and for home energy rating services (herein referred to as Rating Systems). The HERS Technical Manual Publication CEC-400-2008-012, December 2008, which is defined below, shall be incorporated by reference.

The California HERS Program regulations apply to the use of HERS Raters to provide ~~two key services:~~

~~(i) Field verification and diagnostic testing as required by Title 24, Part 6.~~

~~(ii) Whole-House Home Energy Ratings of newly constructed and existing homes.~~

NOTE: In the course of providing a California Whole-House Home Energy Rating, a home energy audit is performed. The California HERS Program includes the case where the energy audit portion of the rating process is completed but a California Whole-House Home Energy Rating score is not designated. When describing that case, these regulations refer to that portion of the rating process as a California Home Energy Audit.

§ 1671 - Definitions

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

For the purposes of these regulations, the following definitions shall apply:

~~ACM Manual means the Low Rise Residential Alternative Calculation Method Approval Manual (Energy Commission Publication CEC 400 2008 002) adopted in Section 10 109(b)(2) of Title 24, Part 1 of the California Code of Regulations.~~

Building Performance Contractor means a contractor who is certified by a Provider to evaluate the comfort and safety aspects of a home in conjunction with its energy features and its energy consumption in a holistic manner to determine recommendations for the best overall performance of a home for the occupant or owner, and is licensed by the California Contractors State License Board as a current and active Class B general building contractor. Either the qualifying individual for the Class B license or the employee who is directly responsible to the qualifying individual for the Class B license for rating services, audit services, and related construction work is certified as a California Whole-House Home Energy Rater by an Energy Commission-approved Building Performance Contractor program as specified in Section 1674(e).

~~California Field Verification and Diagnostic Testing Rater means a Rater who has been trained, tested, and certified by a Provider to perform field verification and diagnostic testing of newly constructed homes or alterations to existing homes to verify compliance with the requirements of Title 24, Part 6.~~

California Home Energy Analyst means a person who works under the direct supervision of a California Whole-House Home Energy Rater and has been trained, tested, and certified by a Provider in accordance with the requirements of Section 1673(a) to perform analysis for a Whole-House Home Energy Rating using an Energy Commission-approved HERS rating software program.

California Home Energy Audit means a process to determine the energy savings and cost-effectiveness of specific measures together with an evaluation of the energy uses listed in Section 1672(d) and a report to present the information used to evaluate the measures and make recommendations for the inclusion of such measures into the home. An audit need not include a Whole-House Home Energy Rating score.

California Home Energy Auditor means a person who has been trained, tested, and certified by a Provider as a California Whole-House Home Energy Rater to provide the information for a California Home Energy Audit.

California Home Energy Inspector means a home inspector who has also been trained, tested, and certified by a Provider and who works under the direct supervision of a California Whole-House Home Energy Rater to gather the data specified in the HERS Technical Manual to enable the development of a California Whole-House Home Energy Rating.

California Whole-House Home Energy Rater means a person who has been trained, tested, and certified by a Provider to properly gather information on the energy consuming features of a home, perform diagnostic testing at the home, evaluate the validity of that information, simulate and perform analysis for a California Whole-House Home Energy Rating or a California Home Energy Audit using an Energy Commission-approved HERS rating software program to estimate the energy consumption of a home using the information gathered on site, and complete all of the cost-effectiveness evaluations described in the HERS Technical Manual.

California Whole-House Home Energy Rating means a process to determine a California Whole-House Home Energy Rating score representing the relative energy efficiency of a newly constructed or existing residential building as compared to the Reference Home.

Certified, as to a Provider and Rating System, means having successfully completed the certification requirements as specified by Section 1674.

Energy Commission means the State of California Energy Resources Conservation and Development Commission, commonly known as the California Energy Commission.

Energy-Rated Home means a newly constructed or existing residential building that has an energy rating pursuant to these regulations.

Executive Director means the Executive Director of the Energy Commission.

Financial Interest means an ownership interest, debt agreement, or employer/employee relationship. Financial interest does not include ownership of less than five percent of the outstanding equity securities of a publicly traded corporation.

HERS Technical Manual or HTM means the HERS Technical Manual, Energy Commission Publication CEC-400-2008-012 (May 2009), and is incorporated by reference.

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).

Note: The definitions of "independent entity" and "financial interest," together with Section 1673(j), prohibit conflicts of interest between Providers and Raters, or between Providers/Raters and builders/subcontractors.

Net Zero Energy Home means a home that has a net annual Time Dependent Valued (TDV) Energy consumption of zero, accounting for both energy consumption and the use of on-site renewable energy production.

Provider means an organization that administers a home energy rating system in compliance with these regulations (referred to as a "home energy rating service organization" in Section 25942 of the Public Resources Code).

Rater means a person who has been trained, tested, and certified by a Provider to perform one or more of the functions or procedures used to develop a California Whole-House Home Energy Rating or a California Home Energy Audit, ~~or the field verification and diagnostic testing required for demonstrating compliance with the Title 24, Part 6, Building Energy Efficiency Standards,~~ and who is listed on a Provider's registry in compliance with Section 1673(d).

Rating means a California Whole-House Home Energy Rating or a California Home Energy Audit, ~~or the field verification and diagnostic testing required for verifying compliance with the Title 24, Part 6, Building Energy Efficiency Standards,~~ as specified by these regulations.

Rating System means the materials, analytical tools, diagnostic tools and procedures to produce home energy ratings, and provide home energy rating ~~and field verification and diagnostic testing services~~ (referred to as "home energy rating services" in Section 25942 of the Public Resources Code).

Reference Home means a low-rise residential building similar to the rated house, but for which the energy performance characteristics of each component exactly meet the reference house specifications defined in the HERS Technical Manual.

~~Service Water Heating means service water heating as defined in Section 101(b) of Title 24, Part 6 of the California Code of Regulations.~~

Time Dependent Valued (TDV) Energy means the time varying energy used by the building to determine the home energy rating pursuant to these regulations. TDV Energy accounts for the energy used at the building site and consumed in producing and delivering energy to a site, including, but not limited to, power generation, and transmission and distribution losses.

§ 1672 - Requirements for Rating Systems

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

(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 the audit is completed as specified by these regulations and the HERS Technical Manual.

(b) Data Collection.

(1) For ratings of existing homes that produce a California Whole-House Home Energy Rating or a California Home Energy Audit, each rating shall be based on a site inspection of the home that includes equipment testing and data collection and ~~diagnostic testing~~ as specified by the Rating System in conformance with these regulations and the HERS Technical Manual. Each Rating System shall have documented procedures for site inspection and equipment testing and diagnostic testing of Energy-Rated Homes.

(A) The equipment testing and data collection shall be completed by a California Whole-House Home Energy Rater or by a California Home Energy Inspector directly supervised by a California Whole-House Home Energy Rater.

(B) The types and the details of data pursuant to each level of Rater certification shall be collected as specified in the HERS Technical Manual.

(C) The minimum level of equipment testing and data collection for a California Whole-House Home Energy Rating or a California Home Energy Audit shall meet the specifications in the HERS Technical Manual.

(2) For ratings of newly constructed homes that produce a California Whole-House Home Energy Rating, each rating shall be based on data gathered from construction documents as specified in the procedures outlined in the HERS Technical Manual and ~~verified or~~ tested on-site by a California Whole-House Home Energy Rater. California Whole-House Home Energy Ratings may be produced based on sampling of one house out of a group of seven as long as all of the houses in the group have the same energy efficiency and on-site generation measures. These ratings may be produced using the multiple orientation approach specified in the Title 24, Part 6, Building Energy Efficiency Standards. Procedures for initial testing, sampling, resampling, and corrective action specified in the Residential Appendices to Title 24, Part 6, shall be followed.

~~(3) For ratings of newly constructed homes to establish compliance with Title 24, Part 6, through field verification and diagnostic testing, data shall be collected or specified by the Residential Appendices to Title 24, Part 6. 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.~~

(c) Data Analysis Requirements. The analysis to complete a California Whole-House Home Energy Rating or a California Home Energy Audit shall be conducted by either a California Whole-House Home Energy Rater or a California Home Energy Analyst under the direct supervision of a California Whole-House Home Energy Rater.

(d) Energy Uses Rated. Each Rating System shall rate the total combined energy efficiency of the following energy uses of each home rated:

- (1) Space heating.
- (2) Space cooling.
- (3) Service hot water.
- (4) Lighting in conditioned space.
- (5) Exterior lighting mounted on buildings or lighting in an unconditioned garage.
- (6) Electric appliances.
- (7) Gas appliances.
- (8) Other interior electric and natural gas uses specified in the HERS Technical Manual.

(e) On-Site Renewable Generation. If a home has on-site renewable generation whose energy production is modeled as specified in the HERS Technical Manual, two ratings shall be determined, one that rates the house with the on-site generation included in the energy calculations and one that rates the home without considering the on-site generation.

(f) Rating Scale. Each Rating System shall determine a California Whole-House Home Energy Rating score based on the annual TDV Energy of a home on a linear scale where 0 (zero) represents a Net Zero Energy Home and 100 represents the Reference Home. An Energy-Rated Home that uses more energy than the Reference Home shall have a rating of greater than 100. The rating shall be for the combined total of the energy uses specified in Section 1672(d).

(g) Method of Calculating TDV Energy. An hourly energy simulation program approved by the Energy Commission shall be used to calculate the TDV Energy of the Energy-Rated Home and the Reference Home for the purpose of calculating the rating. The method shall use standard weather files for the California climate zones and other modeling rules, procedures, and assumptions as specified in the HERS Technical Manual.

(h) Utility Bill Analysis. Every California Whole-House Home Energy Rating or California Home Energy Audit, where utility bills are available for a period of at least twelve months, shall include a utility bill analysis as specified in the HERS Technical Manual.

(i) Recommendations for Energy Efficiency Improvements. Every California Whole-House Home Energy Rating or California Home Energy Audit shall include a list of cost-effective improvements to the energy efficiency of the home as specified in the HERS Technical Manual.

(j) Greenhouse Gas Emissions. Each California Whole-House Home Energy Rating or California Home Energy Audit shall include an estimate of the carbon dioxide emissions attributable to the projected energy use of a home as specified in the HERS Technical Manual.

(k) HERS Report. The information specified in Sections 1672(a) through (j) shall be presented to the client in the form of a HERS Report for either a California Whole-House Home Energy Rating or a California Home Energy Audit as specified in the HERS Technical Manual.

~~(l) Field Verification and Diagnostic Testing. The Provider and Rater shall provide field verification and diagnostic testing of energy efficiency improvements as a condition for those improvements to qualify for the Title 24, Part 6, Building Energy Efficiency Standards compliance credit, as required by the Title 24, Part 6, Building Energy Efficiency Standards and Reference Appendices.~~

(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.

§ 1673 - Requirements for Providers

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

(a) Training and Certification Procedures for Raters. Each Provider shall conduct the following Rater training and certification procedures.

(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 at least the following areas:

(A) Home energy consumption and efficiency data collection, organization and analysis.

(B) Principles of heat transfer.

(C) Building energy feature design and construction practice, including construction quality assurance, on-site renewable generation, and "house as a system" concepts.

(D) Safety practices relevant to home energy auditing procedures and equipment.

(E) Home energy audit procedures.

(F) Energy efficiency effects of building site characteristics.

(G) Types and characteristics of space heating, space cooling, service hot water, and hard wired lighting systems.

(H) Mathematical calculations necessary to utilize the Rating System.

(I) The modeling and use of Energy Commission-approved HERS software required to produce a California Whole-House Home Energy Rating or a California Home Energy Audit and the associated California Home Energy Rating Certificate, California Home Energy Audit Certificate and HERS Report in accordance with the algorithms, procedures, methods, assumptions, and defaults specified in the HERS Technical Manual.

(J) Methods of cost-effectiveness analysis including interest and discount rates, cost-benefit ratios, life cycle cost analysis, calculation of present value, cash flow analysis, payback analysis, and cost estimation.

(K) The function and proper use of diagnostic devices including but not necessarily limited to duct leakage testing equipment, blower doors, and air flow and pressure measurement devices.

(L) Construction types, equipment types, and their associated energy efficiency ramifications.

~~(M) Field verification and diagnostic testing requirements of the Title 24, Part 6, Building Energy Efficiency Standards and the Reference Appendices.~~

~~(NM) Interpretation of prioritized recommendations for efficiency improvements and customized adjustment procedures for specific occupants.~~

~~(ON) The behavioral, psychological, cultural, and socioeconomic influences on energy consumption of home occupants in the United States and California.~~

~~(PO) California Home Energy Rating System Program requirements specified in these regulations.~~

(2) California Home Energy Inspector applicants shall not be required to be trained by the Provider in areas indicated in Sections 1673(a)(1)(H), (I), (J), (K), (M), and (N) ~~and (O)~~ but shall be required to receive specific training in the areas indicated in Sections 1673(a)(1)(A) through (G) and general training in Sections 1673 (a)(1)(L) and (PO).

(3) California Home Energy Analysts applicants shall not be required to be trained by the Provider in Sections 1673(a)(1)(D) and (K) but shall be required to receive specific training in Sections 1673(a)(1)(G), (H), (I), and (J) and general training in Sections 1673(a)(1)(A) to (C), (E), (F), and (L) to (PO).

~~(4) California Field Verification and Diagnostic Testing Raters shall not be required to be trained by the Provider in the areas indicated in Sections 1673(a)(1)(I), (J), (N), and (O) but 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).~~

~~(54) The training for all certifications and Raters shall include thorough instruction in using the Provider's Rating System and database.~~

~~(65) 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 equipment testing and data collection 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 field verification and diagnostic testing for at least one home in the presence and under the direct supervision of the Provider's trainer or Quality Assurance Reviewer. The Provider shall review and approve these ratings for accuracy and completeness.~~

~~(76) The Provider shall require each applicant to take an Energy Commission-approved written and practical test that demonstrates their ~~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.~~

~~(87) Each Provider may establish an Energy Commission-approved challenge test that evaluates competence in each area addressed by the Provider's training program. If a Rater applicant successfully passes this challenge test, the Provider may waive the classroom training requirement and the written and practical test requirements for that applicant. An~~

~~applicant who passes this challenge test shall also successfully meet the requirements specified in Section 1673(a)(6).~~

(98) 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.

(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 field verification and diagnostic services~~ in compliance with these regulations. The agreement shall require Raters to:

(1) Provide home energy rating ~~and field verification services~~ in compliance with these regulations.

(2) Provide true, accurate, and complete data ~~collection, analysis, and ratings, and field verification and diagnostic testing.~~

(3) Not accept payment or consideration in exchange for reporting data gathered for a rating, analytical results used for a rating, or a rating result that was not in fact conducted and reported in compliance with these regulations.

(4) Comply with the conflict of interest requirements as specified in Section 1673(j).

(c) Building Performance Contractor Agreements. To be certified and registered as a Building Performance Contractor, a Provider shall ensure that a Building Performance Contractor applicant has entered into an agreement with the Provider to provide home energy rating services in compliance with these regulations. The agreement shall require Building Performance Contractors to:

(1) Be current and active licensed Class B general building contractors and agree to abide by the laws and regulations of the California Contractors State License Board, including, but not limited to, complying with advertising requirements, home improvement contract requirements, and use of properly licensed subcontractors.

(2) Provide home energy rating services in compliance with these regulations.

(3) Provide home energy rating services under these regulations only with Raters certified under an Energy Commission-approved Building Performance Contractor program pursuant to Section 1674(e).

(4) Comply with requirements for the issuance of building permits, state and local building codes, and the other requirements of Section 7110 of the Contractor's License Law (Business and Professions Code).

(5) Notify the Provider of any citation, suspension, or revocation actions by the California Contractors State License Board against the contractor.

(d) Rater and Building Performance Contractor Registry. As a condition of Rater registry, each Provider shall certify to the Energy Commission that a Rater applicant has met the requirements of Section 1673(a) and entered into an agreement meeting the requirements of Section 1673(b). As a condition of Building Performance Contractor registry, each Provider

shall certify to the Energy Commission that the applicant has met the definition of a Building Performance Contractor and entered into an agreement meeting the requirements of Section 1673(c). The Provider shall maintain a registry of all Raters, persons, or firms that meet these requirements, provide an electronic copy of the registry to the Energy Commission, and make that registry available in printed or electronic form upon written request.

(e) Data Maintenance.

(1) Each Provider shall record and maintain for a period of ten years all data collected for a rating if the data is listed as a required or optional input for the rating in question. This requirement shall apply to data collected from a site visit, from the plans for a newly constructed building, or from a utility bill analysis. All required or optional outputs generated for a rating shall also be recorded.

~~(2) For homes that have received a field verification rating, the following information shall also be collected and maintained for ten years and may be in an electronic format:~~

~~(A) The energy efficiency improvements field-verified and diagnostically tested.~~

~~(B) Whether or not the builder chose to include the home in a sample for field verification and diagnostic testing as specified in the Residential Appendices to Title 24, Part 6.~~

~~(C) Whether or not initial field verification and diagnostic testing as specified in the Residential Appendices to Title 24, Part 6, was conducted on the home.~~

~~(D) Whether or not the home in a sample was actually selected and field-verified and diagnostically tested as specified in the Residential Appendices to Title 24, Part 6.~~

~~(E) Whether or not the home in a sample was actually selected for resampling and field-verified and diagnostically tested after a sampling failure was found in the sample as specified in the Residential Appendices to Title 24, Part 6.~~

~~(F) Whether or not the home in a sample was field-verified and diagnostically tested and corrective action was taken after a resampling failure was found in the sample as specified in the Residential Appendices to Title 24, Part 6.~~

~~(G) Whether or not the homeowner declined to have field verification, diagnostic testing, and corrective action taken after occupancy as specified in the Residential Appendices to Title 24, Part 6.~~

~~(H) The Certificate of Compliance, the Installation Certificate, and the Certificate of Field Verification and Diagnostic Testing.~~

~~(f) Field Verification and Diagnostic Testing Evaluation. Providers shall maintain a database of the information specified in Section 1673(e)(2) for a minimum 10 percent random sample of the homes actually field-verified and diagnostically tested annually, or 500 such homes annually, whichever is less. Each Provider shall provide this information annually in electronic form to the Energy Commission for evaluating the effectiveness of field verification and diagnostic testing. If the Energy Commission makes this information public, it will be in aggregated form only. All of this information shall be organized according to climate zones as defined in Section 101(b) of Title 24, Part 6 of the California Code of Regulations.~~

(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. If the Energy Commission makes this information public, it will be in an aggregated form only.

(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.

(i) Quality Assurance. Each Provider shall have a quality assurance program that provides for at least the following:

(1) Quality Assurance Staff. The Provider shall have a designated Quality Assurance Manager to oversee the quality assurance process. The Quality Assurance Manager shall appoint as many Quality Assurance Reviewers as necessary to assist with the completion of the tasks outlined in this Subsection 1673(i). The qualifications of the Quality Assurance Manager and the Quality Assurance Reviewers shall be submitted to the Energy Commission.

(2) Initial Review. The Provider shall review and approve for accuracy and completeness the rating documentation for at least the first five homes which a Rater performs after completion of the requirements specified in Section 1673(a)(1) through Section 1673(a)(6), not including those homes rated under the Provider's direct supervision as specified in Section 1673(a)(6).

(3) Quality Assurance for California Whole-House Home Energy Raters and California Field Verification and Diagnostic Testing Raters.

(A) For each Rater, the Provider shall annually evaluate the greater of one rating, randomly selected or one percent of the Rater's past 12 month's' total number of ratings (rounded up to the nearest whole number) for each measure tested by the Rater. For Raters that have had at least one quality assurance evaluation for any measure in the past 12 months, this evaluation shall only be required to be done for those measures that have been tested by the Rater at least 10 times in the past 18 months. The Provider shall independently repeat the rating to check whether the rating was accurately completed by the Rater, and determine whether information was completely collected and reported. The Provider also shall conduct the same check on one percent of all ratings conducted through the Provider, selected randomly from the Provider's entire pool of ratings on an ongoing basis. For Energy-Rated Homes using the Building Performance Contractor exception to Section 1673(j)(3), at least five percent of the Energy-Rated Homes shall be evaluated by a Quality Assurance Reviewer.

(B) Raters shall not be informed that a building or installation will be field checked until after they have completed the original rating. ~~The field check shall occur after the submission of the Certificate of Field Verification and Diagnostic Testing for a field verification rating and after the distribution of the HERS Report for a home energy rating.~~

(C) These evaluations by the Provider's Quality Assurance personnel shall be documented in the Provider's database and include the results of all testing performed by the Provider's Quality Assurance personnel. If the Provider's Quality Assurance personnel determine that the Rater's results did not meet the criteria for truth, accuracy, or completeness of these regulations, then the Provider shall report the quality assurance failure on the Provider's Rater registry and Building Performance Contractor registry websites for a period of six months. In

addition, the Provider's Quality Assurance personnel shall evaluate two additional ratings of the failed measure by the same Rater performed in the past 12 months. If a second deficiency is found, then the Rater shall have two percent (rounded up to the nearest whole number) of his ratings of the failed measure evaluated for the next 12 months by all Providers. The Provider's Quality Assurance Manager shall notify other Providers in writing or by electronic mail of Raters that are required to have additional quality assurance verification as required by this provision.

(4) Additional Quality Assurance for Unrated or Untested Buildings or Installations.

(A) For houses or installations passed as part of a sampling group but not specifically field verified or rated by a Rater, the greater of one house or installation or one percent of all unrated or untested buildings or installations in groups sampled by the Rater shall be independently rated or field verified by the Provider's Quality Assurance personnel.

(B) These quality assurance verifications shall be blind tests in that the Provider shall not inform the installer, builder, or the Rater that the specific building or installation will be verified.

(C) The results of these quality assurance verifications shall be entered into the Provider's database. The Provider shall summarize the results of these quality assurance verifications and submit them to the Energy Commission on an annual basis and provide the Energy Commission with ongoing access to the database and associated summaries of the results of these verifications.

(5) Complaint Response System. Each Provider shall have a system for receiving complaints. The Provider shall respond to and resolve complaints related to ratings and field verification and diagnostic testing services and reports. Providers shall ensure that Raters inform purchasers and recipients of ratings and field verifications and diagnostic testing services about the complaint system. Each Provider shall retain all records of complaints received and responses to complaints for five years after the date the complaint is presented to the Provider and annually report a summary of all complaints and action taken to the Executive Director.

(j) Conflict of Interest.

(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. EXCEPTION to Section 1673(j)(3): California Whole-House Home Energy Raters, who are working as or for a Building Performance Contractor certified under an Energy Commission-approved Building Performance Contractor program as part of a Provider's Rating System as specified in Section 1674(e) of the regulations and in the HERS Technical Manual, shall not be required to be an independent entity from the person(s) or firm(s) performing the work on a home. This exception shall 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 Title 24, Part 6.

(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.

§ 1674 - Certification of Providers and Rating Systems

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

(a) Application. A person or entity wishing to be certified as a Provider and wishing to have a Rating System certified shall submit four copies of an application to the Energy Commission. The application shall contain:

(1) A complete copy of all rating procedures, manuals, handbooks, Rating System descriptions, and training materials.

(2) A detailed explanation of how the Rating System meets each requirement of Section 1672.

(3) A detailed explanation of how the Provider meets each requirement of Section 1673.

(4) The name, address, and telephone number of the Provider and a statement of where its principal place of business is and where and upon whom service of legal process can be made.

(5) Upon Energy Commission request, if the Provider is a corporation, a copy of the articles of incorporation and the current by-laws.

(6) If the Provider is a partnership, the names, addresses, telephone numbers, and partnership status (for example, general, managing) of all the partners, and a copy of the current partnership agreement.

(7) The names, addresses, telephone numbers, and business relationships of all the Provider's owners, parents, subsidiaries, and affiliates.

(8) A statement that ratings are accurate, consistent, and uniform, utility bill estimates are reasonable, and recommendations on cost-effective energy efficiency improvement measures are reliable.

(9) A statement that the Provider understands and will not knowingly fail to comply with the requirements of these regulations.

(10) A statement under penalty of perjury that all statements in the application are true, provided in the form specified by Section 2015.5 of the Code of Civil Procedure.

(b) Confidentiality of Information. Any Provider who submits the required application information and wishes to have that information treated as confidential in order to limit its disclosure shall, at the time of submitting the information, apply for a confidential designation as specified in Section 2505 of Title 20 of the California Code of Regulations.

(c) Energy Commission Consideration.

(1) The Energy Commission's Executive Director may request additional information from the applicant necessary to complete and evaluate the application.

- (2) The Executive Director shall provide a copy of its evaluation to interested persons. The Executive Director may convene a workshop to receive comments from interested persons.
- (3) Within 90 business days of receiving the complete application, the Executive Director shall send to the Energy Commission and to the applicant a written recommendation that the Energy Commission certify the Provider and its Rating System or deny that certification.
- (4) The Executive Director shall recommend certifying the Provider and Rating System if the Executive Director finds the following:
 - (A) The Rating System meets all of the requirements of Section 1672.
 - (B) The Provider meets all of the requirements of Section 1673.
- (5) The Energy Commission shall act on the recommendation at its next regularly scheduled Business Meeting that is at least 15 business days after the date that the recommendation was mailed to the applicant.
- (6) The Energy Commission shall certify the proposed Provider and Rating System if it confirms the Executive Director's findings in Section 1674(c)(4).
- (7) Upon certification the Energy Commission shall assign the Provider a three-digit identification number.
- (8) All applicants have the burden of proof to establish that their applications should be approved.

(d) HERS Rating Software Approval. As part of a Provider's Home Energy Rating System the Provider shall apply for approval of HERS rating software. Application for approval of HERS rating software may be submitted with the application for certification of the Provider and their Rating System or as an amendment to their approval and certification. However, approval of HERS rating software is subject to an independent timeline.

The approval process for HERS rating software shall only begin after Energy Commission approval of the software as compliance software for the Title 24, Part 6, Building Energy Efficiency Standards in accordance with the requirements of the ACM Manual.

(1) If the application for the HERS rating software approval is complete, the Executive Director shall make the application available to interested parties by posting the information on the Energy Commission website for public comments. Comments from interested parties shall be submitted within 60 business days after acceptance of the application or approval of the software as compliance software for the Title 24, Part 6, Building Energy Efficiency Standards, whichever is later.

(2) Within 75 business days of receipt of an application or approval of the software as compliance software for the Title 24, Part 6, Building Energy Efficiency Standards, whichever is later, the Executive Director may request any additional information needed to evaluate the application. If the additional information is incomplete, consideration of the application shall be delayed until the applicant submits complete information.

(3) Within 75 business days of receipt of the application or approval of the software as compliance software for the Title 24, Part 6, Building Energy Efficiency Standards, whichever is later, the Executive Director may convene a workshop to gather additional information from the applicant and other interested parties. Interested parties shall have 15 business days after the workshop to submit additional information regarding the application.

(4) Within 90 business days after the Executive Director receives the application, or within 30 business days after receipt of complete additional information requested, or within 60 business days after the receipt of additional information submitted by interested parties, whichever is later, the Executive Director shall submit to the Energy Commission a written recommendation on the application.

(5) The application and the Executive Director's recommendation shall be placed on the business meeting agenda and considered at a business meeting within 30 business days after submission of the recommendation.

(6) All applicants have the burden of proof to establish that their applications should be approved.

(e) Special Approval. Programs within Rating Systems using California Home Energy Inspectors or Building Performance Contractors to develop or complete California Whole-House Home Energy Ratings or California Home Energy Audits shall be separately approved by the Energy Commission. ~~Rating Systems using Third Party Quality Control programs as described in the Residential Appendices to Title 24, Part 6 for field verification and diagnostic equipment testing procedures to verify compliance with Title 24, Part 6, shall also be separately approved by the Energy Commission.~~

(f) Re-certification. A certified Provider shall notify the Energy Commission whenever any change occurs in any of the information, documentation, or materials the Provider submitted to the Energy Commission under Section 1674(a), and shall submit the changed information to the Energy Commission. Where this changed information could affect the Provider's compliance with these regulations, the Energy Commission may require that the Provider and the Rating System be re-certified under the process described in Section 1674. The Executive Director may waive re-certification for non-substantive changes. The Energy Commission may also require that Providers and Rating Systems be re-certified if the requirements of these regulations are amended or modified.

§ 1675 - Review by the Energy Commission

PLACEHOLDER for sunset language so deletions will not be in effect until January 1, 2026.

(a) Annual Review. The commission may annually review the performance of Providers certified under Section 1674 to determine whether the Providers comply with the requirements of these regulations. This review may include interviewing recipients of ratings ~~and field verification and diagnostic testing services and reviewing reports on a voluntary basis.~~

(b) Request for Investigation. Any person or entity may file a request for investigation concerning any violation of these regulations as provided for in Section 1230 et. seq. of Title 20 of the California Code of Regulations. The commission may, for good cause, conduct an

investigation and, if necessary, hearing, under the procedures established in Section 1233 et. seq. Each Provider shall provide all information requested by the Energy Commission regarding any annual review or complaint proceeding.

(c) Commission Determination. If the commission determines there is a violation of these regulations or that a Provider is no longer providing ~~rating-field-verification-and-diagnostic testing-services~~, the commission may revoke the certification of the Provider pursuant to Section 1233 et. seq.