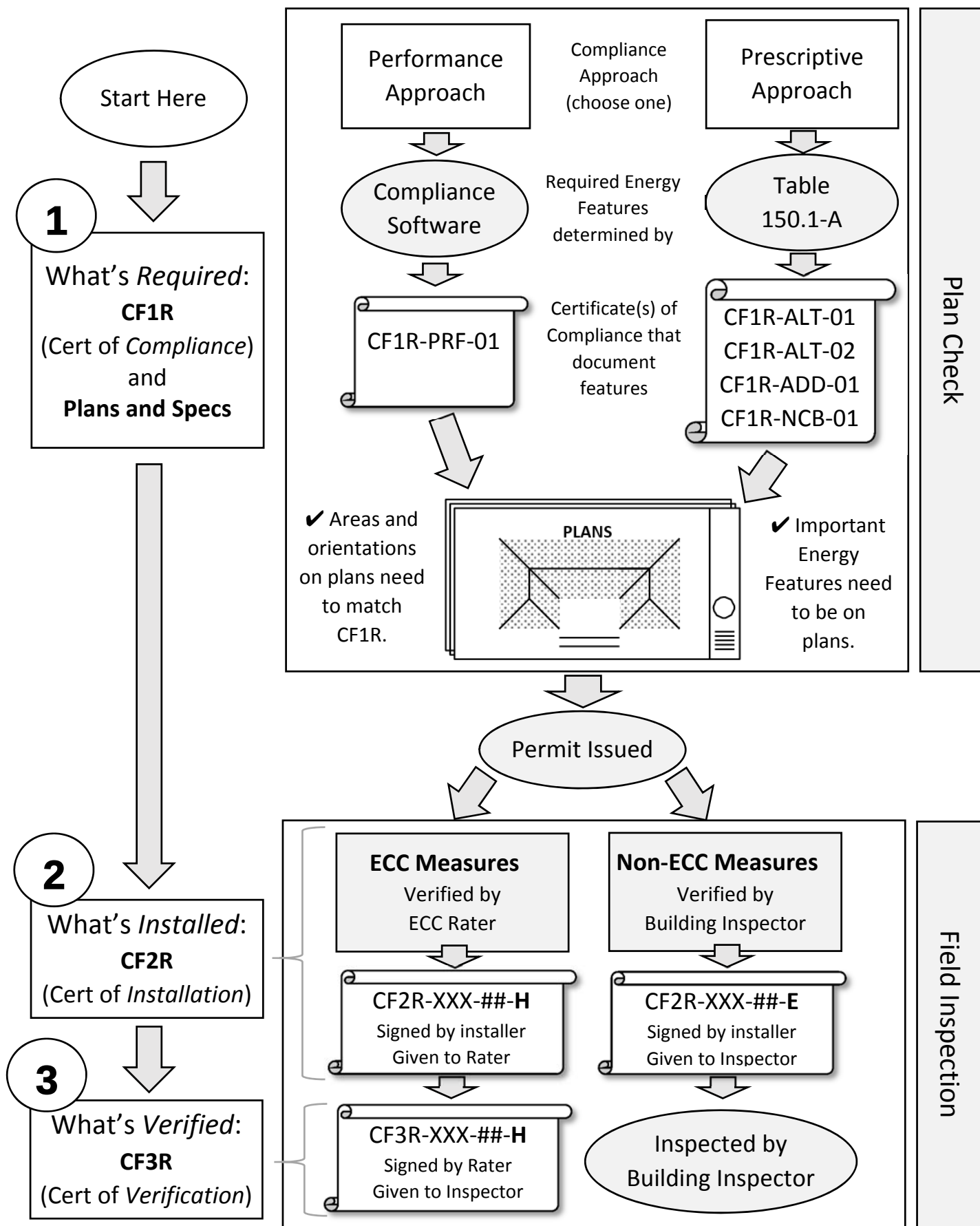


Compliance Process for Residential New Construction and Additions



Suggested Guidelines for Building Departments to Handle Permit Submittals for HVAC Alterations (Change-outs)

Whether or not a HERS rater is required on the project needs to be determined as early as possible to prevent problems later. It is not required to be known prior to issuing a permit, or even performing the work, **but because it can have a substantial impact on cost and scope of the project**, it should be done ASAP. Note that for alterations, a CF1R is not required to issue a permit, but is required to close a permit.

The HERS Providers' Registries do an excellent job walking people through the process (like "Turbo-Tax") and it is *recommended* that all HVAC alterations start there. It will help the applicant determine whether or not HERS verification is required, what HERS tests and compliance forms are required, and it provides on-line tracking of the process for all parties. It will also generate a CF1R appropriate to the project, however, the HERS Provider charges a small fee and not all projects are required to be registered with a HERS provider.

Only projects that require HERS verification are *required* to be registered with a HERS Provider. Typically, this includes any alteration that involves the installation or replacement of the following:

- A/C condenser
- A/C coil
- Package unit
- Air handler (furnace, fan coil, etc.)
- Any refrigerant containing component
- More than 25' of ducts

Exceptions to the requirement for duct sealing and HERS duct testing include:

- Duct systems that are insulated or sealed with asbestos
- Duct systems that have been previously tested for duct leakage
- Duct systems with less than 25 feet of ducts outside of the insulated shell of the building

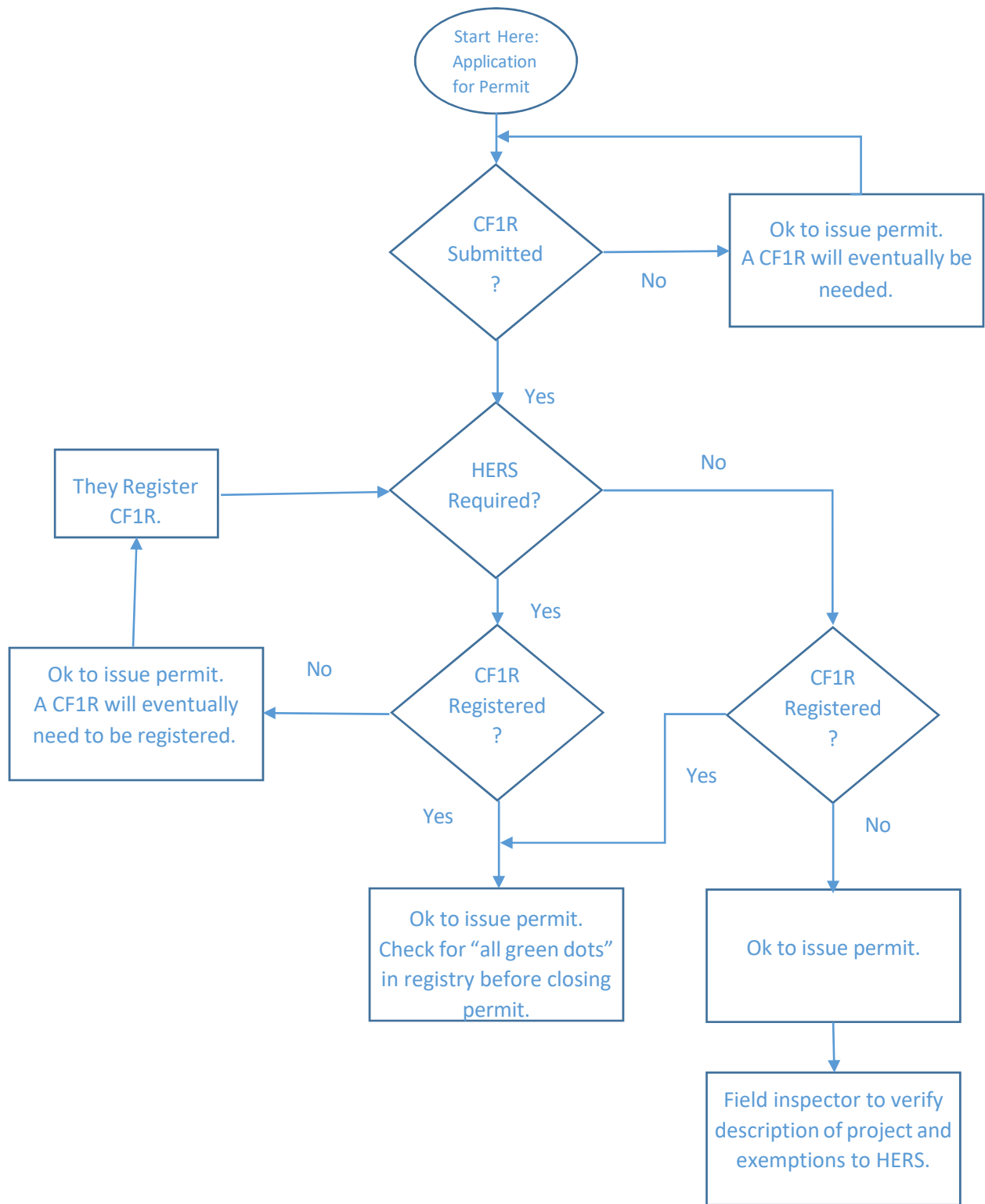
Exceptions to the requirement for refrigerant charge verification by a HERS rater include:

- Project is not in climate zones 2, 8-15.
- Factory charged package units

Determining whether a project needs a HERS rater or not can be quite complex, which is why using the registry is always recommended, however, it can be done without the registry and if a HERS rater is not required, the registry is not needed at all.

When a permit applicant submits a non-registered CF1R-ALT-05 for an HVAC alteration, first determine if the CF1R indicates that HERS verification is needed. If it does, then they will eventually have to register the project and the registry will guide the process. If it does not, some effort should go into determining if the project is correctly described, and the Residential Compliance Manual Appendix E flow charts should be used (attached) to determine if no HERS rater is truly required. **Note that if a HERS rater is not required the exceptions shown above must be field verified by the building inspector.**

Use the following flow chart to guide you through this process. Once a project has been registered, use the HERS Registry to track the completion of all the necessary compliance documentation. Look for "All Green Dots".





TRI-COUNTY
REGIONAL ENERGY NETWORK

SAN LUIS OBISPO • SANTA BARBARA • VENTURA

Using the ECC (formerly HERS) Registry for Energy Code Compliance

Russ King, Coded Energy

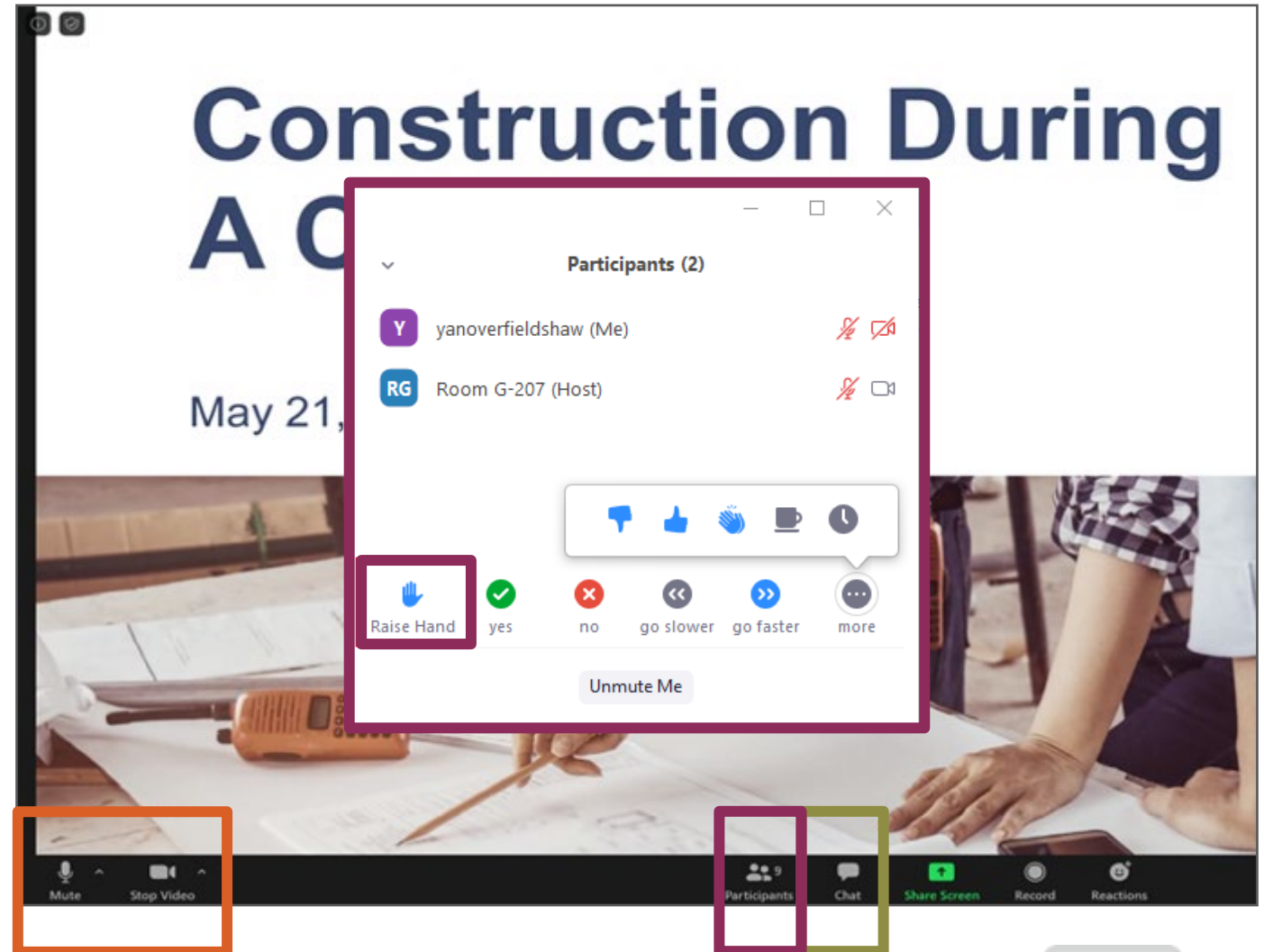
July 30, 2026

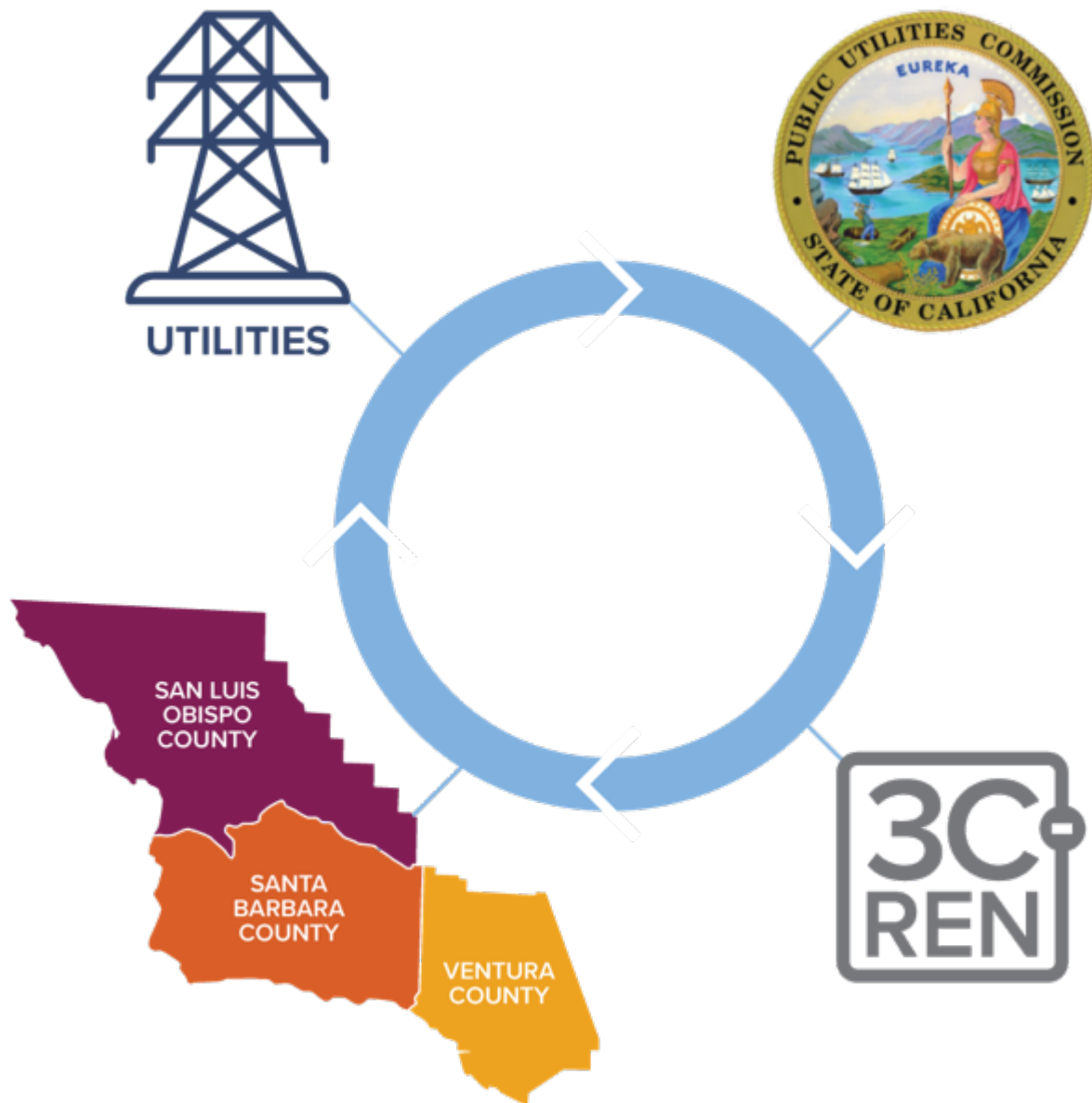


Before We Begin

Here are some quick reminders:

- Call in? Please **share** full name to confirm attendance
- To receive AIA LUs, you **must attend** at least 80% of the training. Attendance will be verified
- Use the "**Chat**" to share questions or comments
- Slides/recording are **shared** after most events and can be found on 3C-REN's on-demand page
- 3C-REN does **not** allow **AI notetakers**, unless used to accommodate a disability





Tri-County Regional Energy Network

3C-REN is a collaboration between the tri-counties

Our programs reduce energy use for a more sustainable, equitable and economically vibrant Central Coast

Our free services are funded via the CPUC, bringing ratepayer dollars back to the region



Our Services

Incentives



HOME ENERGY SAVINGS

3c-ren.org/for-residents
3c-ren.org/multifamily



COMMERCIAL ENERGY SAVINGS

3c-ren.org/commercial

Contractors can enroll at
3c-ren.org/contractors

Training



BUILDING PERFORMANCE TRAINING

3c-ren.org/events
3c-ren.org/building



ENERGY CODE CONNECT

3c-ren.org/code

View past trainings at
3c-ren.org/on-demand

Technical Assistance



AGRICULTURE ENERGY SOLUTIONS

3c-ren.org/agriculture



ENERGY ASSURANCE SERVICES

3c-ren.org/assurance





Local Governments Empowering Our Communities

ECC (formerly HERS) Registry Training

Single Family Residential

BayREN Codes & Standards

www.BayREN.org

2025 Code Cycle
Effective January 1, 2026

About the Bay Area Regional Energy Network (BayREN)

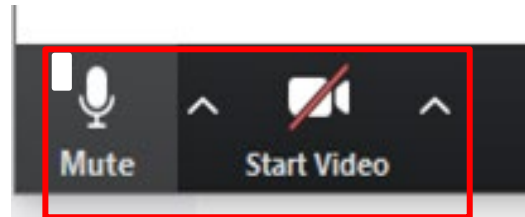
- BayREN's **Codes and Standards** trainings provide building department staff and private sector building professionals with tools and strategies for improving energy code compliance.
- Upcoming online trainings include:
 - March 10 – **Residential New Construction**
 - March 25 – **Residential Additions**
- Find all the trainings we offer and how to sign up here: [**BayREN.org/events**](https://www.bayren.org/events)



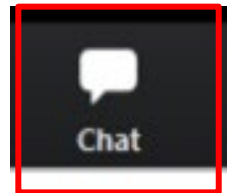
Zoom Meeting How-Tos

- Video camera not needed.

- Please **mute** yourself.



- Use **Chat** function if you have a question or comment.



- We will break for questions periodically.

Introduction

ECC (formerly HERS) Registry Training

Single Family Residential

BayREN Codes & Standards

2025 Code Cycle
Effective January 1, 2026



“HERS” Has Been Renamed “ECC”

Starting with the **2025 Energy Code** (effective January 1, 2026)

the **Home Energy Rating System (HERS)**



is renamed



the **Energy Code Compliance (ECC)** program.

Today's Learning Objectives

- What the **ECC program** is in the energy code
- How ECC verification fits into the **overall compliance process**
- **When a project is required to be registered** with an ECC provider and when it is not
- **How to find a project** in an ECC registry
- **How to use the ECC registry** to track compliance documentation for a project
- How to use the ECC registry to **save time on field inspections**



Agenda

1. Energy Code Compliance (ECC) Registry
2. ECC Registry Building Types
3. The ECC Process
4. ECC Documents
5. ECC & Residential HVAC Alterations
6. Best Practices for ECC and Enforcement
7. ECC Registry Walkthrough
8. Q&A, Additional Resources

Energy Code Compliance (ECC) Registry

BAYREN



What is the ECC Program?

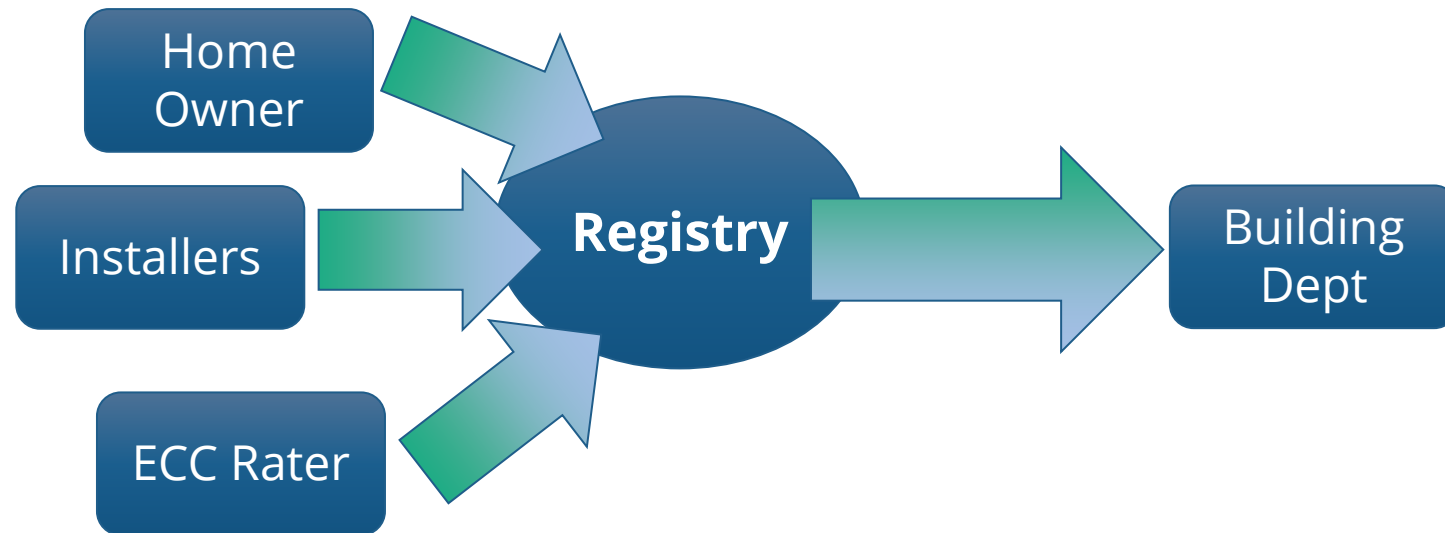
ECC stands for **Energy Code Compliance**.

It is a long-standing training and certification program for field verification of energy features.

- The people doing these verifications are called “**ECC Raters**.”
- The organizations that train and track ECC Raters are called “**ECC Providers**.”
- For the Title 24 Part 6 energy code, ECC Raters are third-party special inspectors to verify energy features designated as “**ECC measures**.”
- All other “**non-ECC measures**” are the responsibility of the local building inspector.

What is an ECC Registry?

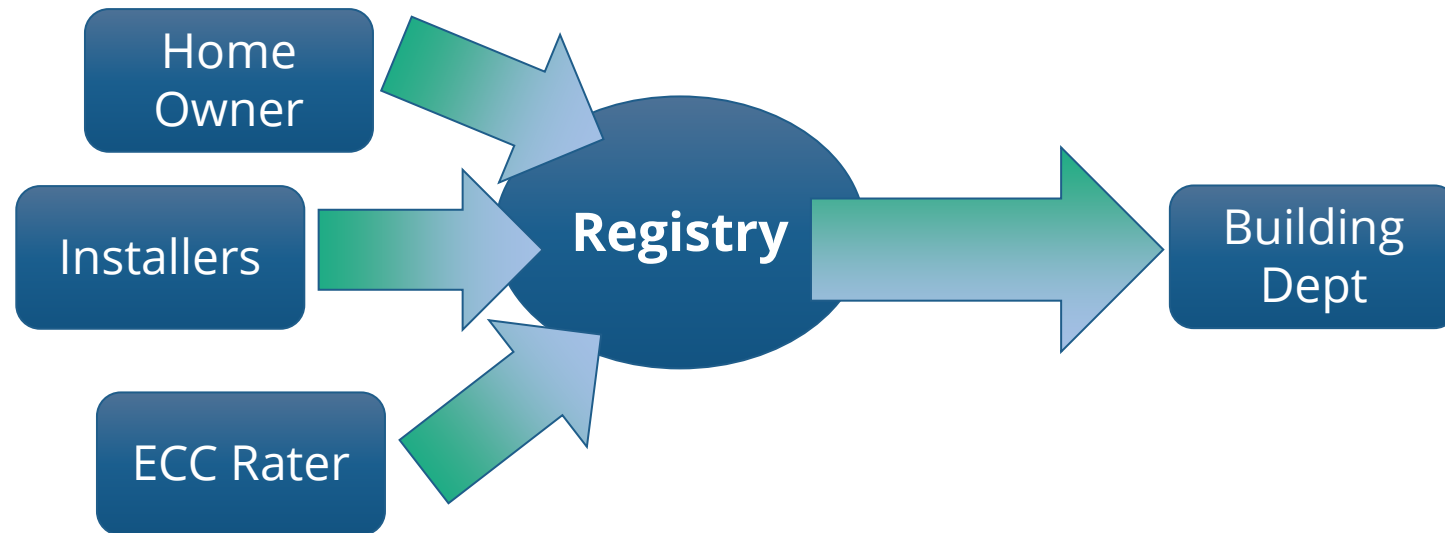
ECC Providers are required to maintain **ECC Registries** - online databases that provide access to all the energy code compliance documentation and test results for projects requiring ECC verification.



What is an ECC Registry?

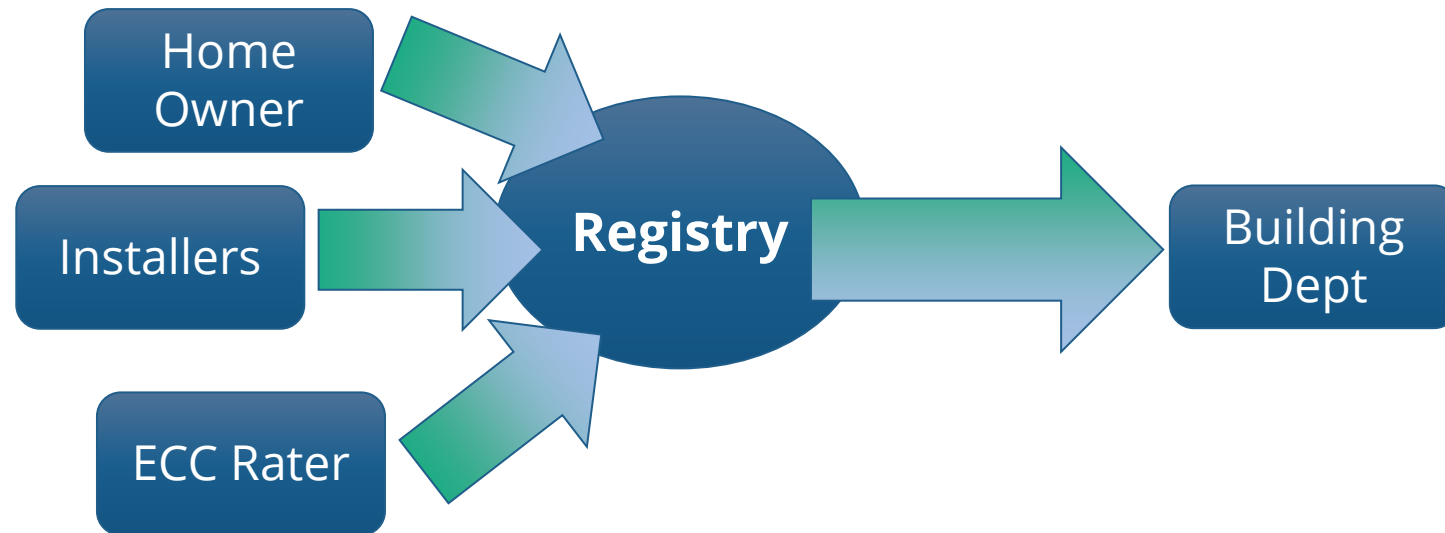
You can track the status of projects from start to finish

- Once a project is in the registry, it can be tracked from start to finish by *anyone* involved with the project, especially the **building department**.
- It is common for documents and requirements to change as a project progresses.
- The registry tracks these changes.



What is an ECC Registry?

- No more paper for any registered projects (unless you prefer hard copies).
- *Anyone* can register a new project with an ECC Provider, even a homeowner.
- *Anyone* can be given access to view the status of the project electronically.
- A project can be viewed **in the field** using a smart phone or tablet with internet access.



ECC Registry Residential Building Types



Building Type Reorganization (for 2022)

Since the 2022 Standards, there was a **significant change with how building types are organized** as it relates to energy code.

- Definition of **Single Family Residential** has been clarified.
- **Low-rise Multifamily** now has its own sections of code (Sections 160, 170 and 180).
- Compliance documentation is now specific to:
 - Single Family Residential (**CF forms**)
 - Low-rise Multifamily Residential (**LRC forms**)
 - High-rise Multifamily Residential (**NRC forms**)

ECC Registry – Single Family Residential

- When a project requires **at least one ECC-verified feature**, the CF1R Certificate of Compliance (**and all subsequent CF2R and CF3R documents**) must be registered with in an ECC registry.
- An ECC registry is an on-line **database** that generates all the CF1R, CF2R and CF3R documents for a registered project.
- This allows all interested parties the ability to create, complete, sign, and view **all documents** electronically in one central location.

ECC Registry – Single Family Residential

- Most projects require an ECC verification.
- Forms for non-ECC projects must be tracked manually.
- They can be hard copies or electronic files, but the electronic files will not reside in a central location.



Source: [Homes.com](https://www.homes.com)

ECC Registry – Single Family Residential

The following **residential** projects **all** require ECC verification and therefore must be registered with an ECC provider:

- Any **new** construction home
- Any **addition over 1,000 square feet**
- Any **addition** or **alteration** that involves adding or replacing:
 - An A/C condenser,
 - An A/C coil,
 - An air handler (furnace), or
 - 25 feet or more of duct.

There are some **exceptions** to these ECC triggers, but not many.

ECC Registry – Low-rise Multifamily

Low-rise Multifamily Residential projects are treated very similarly to single family residential projects.

Except that **forms** are named differently:

- **LMCC** (like the CF1R for single family)
- **LMCI** (like the CF2R for single family)
- **LMCV** (like the CF3R for single family)



Source: [Kiavi](#)

ECC Registry – Low-rise Multifamily

Nonresidential portions of these buildings (offices, gyms, laundry and common areas, etc.) may be treated separately as nonresidential projects and use Non-Res forms (NRCC, NRCI, NRCV, NRCA).



ECC Registry – Low-rise Multifamily

- LRMF projects that have at least one ECC measure, must be registered with an ECC provider and use only registered forms, just like single family projects.
- LRMF projects will each have a Project Status Report (PSR) like SFR projects.

ECC Registry – Nonresidential

- For **Nonresidential** projects, there are some similarities between ECC **verification** testing (NRC**V** forms) and **acceptance** testing (NRC**A** forms).
- ECC is **independent** third-party testing by a special inspector.
- Acceptance Testing can be done by the installer, if certified, or a third party.
- There is no nonresidential ECC registry that helps you determine what forms are required like there is for residential.
- If nonresidential forms are required, only the NRC**V** forms need to be registered.

ECC Registry – Nonresidential

The following features require ECC verification on *non-multifamily Nonresidential*:

- **Duct leakage**, if modeled in the performance approach
- **Duct leakage**, if required by the prescriptive approach for new construction or alterations

Both use the NRCV-MCH-04 form.



Source: [Major Painting](#)

ECC Registry – High-rise Residential

High-rise residential projects (considered Nonresidential) have the following ECC tests:

- Enclosure Air Leakage (NRCV-MCH-24)
- Mechanical Ventilation (NRCV-MCH-27)
- Central Hot Water System Distribution (NRCV-PLB-21)
- Single Dwelling Hot Water System Distribution (NRCV-PLB-22)

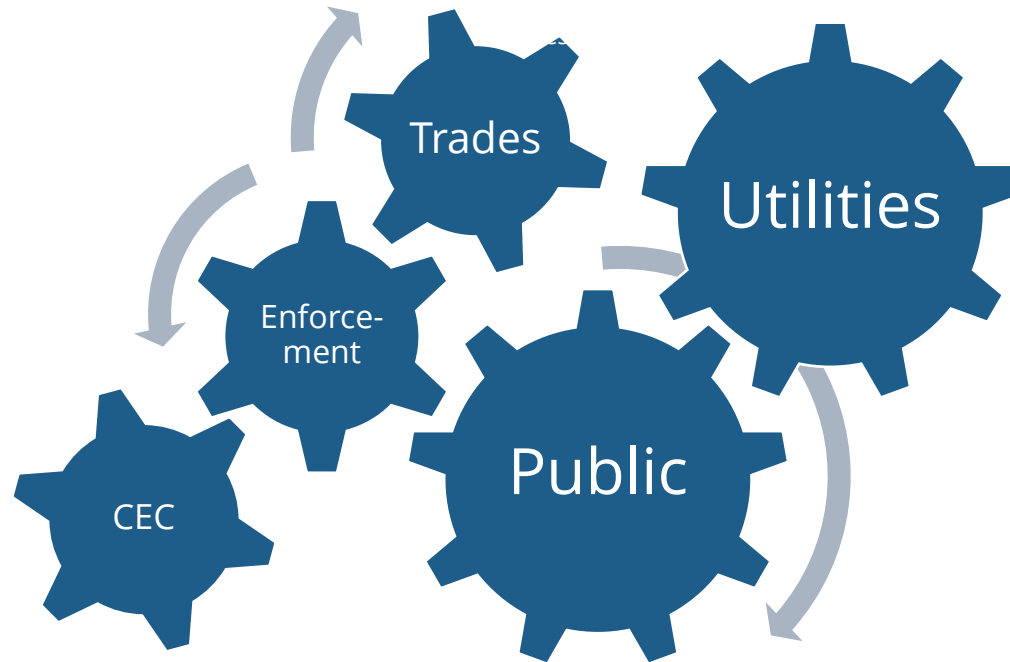
The Energy Code Compliance Process

BAYREN



The Compliance Process

Before “diving into” the details of the energy code, it is first important to understand the overall process and how different people fit into it.



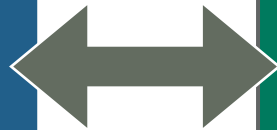
Energy Code Compliance Options

Mandatory Measures: Minimum requirements that must **always** be met

Prescriptive Path

- Usually a “prescribed” list of measures by CZ.
- No design flexibility.
- Common for alterations, changeouts, and smaller additions.

Pick One



Performance Path

- The energy performance of the “prescriptive package” is the target, but tradeoffs are allowed.
- Based on an energy simulation using State-approved software (CBECC, Energy Pro, etc.).
- Very common for new construction and larger additions.
- Rare for alterations, changeouts, etc.

Prescriptive Approach Uses Table 150.1-A

In the performance approach, the prescriptive features set the **target** energy use but trade-offs between features are allowed.

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TABLE 150.1-A COMPONENT PACKAGE – Single-Family Standard Building Design (continued)

Building Envelope	CZ 1	CZ 2	CZ 3	CZ 4	CZ 5	CZ 6	CZ 7	CZ 8	CZ 9	CZ 10	CZ 11	CZ 12	CZ 13	CZ 14	CZ 15	CZ 16
HVAC and Water Heating Systems																
Space Heating - Electric Resistance Allowed	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Space Heating - If gas, AFUE ²⁰	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Space Heating - If Heat Pump, HSPF ²¹	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
Space Cooling - SEER ²	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN
Space Cooling - Whole-House Fan ⁶	NR	NR	NR	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
Refrigerant Charge Verification Air Conditioners	NR	REQ	NR	NR	NR	NR	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
Refrigerant Charge Verification Heat Pumps	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
Central Fan Integrated Ventilation System - Fan Efficacy	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
Option B ¹³ Roof/Ceiling - Duct Insulation	R 8	R 8	R 6	R 8	R 6	R 6	R 6	R 8	R 8	R 8	R 8	R 8	R 8	R 8	R 8	R 8
Option B ¹³ - §150.1(c)9A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Option C ¹⁴ Roof/Ceiling - Duct Insulation	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6	R 6
Option C ¹⁴ - §150.1(c)9B	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
FID required if HRV/ERV Systems Installed - §150.1(c)15	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ
Water Heating - §150.1(c)8	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ

Footnote requirements to TABLE 150.1-A:

SECTION 150.1 – PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS

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TABLE 150.1-A COMPONENT PACKAGE – Single-Family Standard Building Design (continued)

Building Component Walls, Floors, Doors, Fenestrations, and Qill	CZ 1	CZ 2	CZ 3	CZ 4	CZ 5	CZ 6	CZ 7	CZ 8
Above Grade Framed Walls ¹	U 0.048 R 13	U 0.048 R 13	U 0.048 R 13	U 0.048 R 13	U 0.048 R 13	U 0.065 R 13	U 0.065 R 13	U 0.048 R 13
Above Grade Masonry/ Mass Wall Interior ^{1,5,6}	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13
Above Grade Masonry/ Mass Wall Exterior ^{1,5,6}	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0	U 0.125 R 8.0
Below Grade Interior Walls ⁷	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13	U 0.077 R 13
Below Grade Exterior Walls ⁷	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0	U 0.200 R 5.0
Slab Perimeter Floors	NR	NR	NR	NR	NR	NR	NR	NR
Raised Floors	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19	U 0.037 R 19
Concrete Raised Floors	U 0.092 R 8.0	U 0.092 R 8.0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0	U 0.269 R 0
Fenestration - Maximum U- Factor ¹²	0.27	0.27	0.27	0.27	0.27	0.30	0.30	0.30
Fenestration - Maximum SHGC	NR	0.23	NR	0.23	NR	0.23	0.23	0.23
Fenestration - Maximum Total Area	20%	20%	20%	20%	20%	20%	20%	20%
Fenestration - Maximum West Facing Area	NR	5%	NR	5%	NR	5%	5%	5%
Door - Maximum U-Factor	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Quality Insulation Installation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

SECTION 150.1 – PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS

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TABLE 150.1-A COMPONENT PACKAGE – Single-Family Standard Building Design

Building Component Roofs and Ceilings	CZ 1	CZ 2	CZ 3	CZ 4	CZ 5	CZ 6	CZ 7	CZ 8	CZ 9	CZ 10	CZ 11	CZ 12	CZ 13	CZ 14	CZ 15	CZ 16
Option B ¹³ Below Roof Deck Insulation ^{1,2} (with Air Space)	NR	NR	NR	R 19	NR	NR	NR	R 19	R 19	R 19	R 19	R 19	R 19	R 19	R 19	R 19
Option B ¹³ Ceiling Insulation	R 38	R 38	R 30	R 38	R 30	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
Option B ¹³ Radiant Barrier	NR	REQ	REQ	NR	REQ	REQ	REQ	NR	NR	NR	NR	NR	NR	NR	NR	NR
Option C ¹⁴ Ceiling Insulation for Vented Attics	R 38	R 30	R 30	R 30	R 30	R 30	R 30	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
Option C ¹⁴ Radiant Barrier for Vented Attics	NR	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	REQ	NR
Option C Roof Deck Insulation for Cathedral Ceilings ^{1,4}	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38	R 38
Low-Sloped Roofing Product Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.63	NR	0.63	NR
Low-Sloped Roofing Product Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.75	NR	0.75	NR
Steep-Sloped Roofing Product Aged Solar Reflectance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.20	0.20	0.20	0.20	NR
Steep-Sloped Roofing Product Thermal Emittance	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.75	0.75	0.75	0.75	NR

SECTION 150.1 – PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS

Features vary by CZ

Performance Approach Uses a Computer to Calculate Energy Use

After the house is made to comply in the software, a file is uploaded to the ECC registry which creates the **registered CF1R**. It can also print an **unregistered CF1R**, like this one.

Do not accept unregistered CF1Rs for new construction.

The screenshot displays the EnergyPro software interface on the left and a generated Certificate of Compliance (CF1R) document on the right. A large red diagonal stamp with the text "Not useable for compliance" is overlaid across the CF1R document.

EnergyPro - [Res Sample (5)]

Project Design Data

General

Building Name: Residential Example
Building Type: New
Job No: M52000
Front Orientation: 90
Rotation: 0

Location

Country: UNITED STATES
State: California
City: San Bernardino
Zone: 10
☐ User Defined

Principal Heating Source

☒ Natural Gas
☐ Propane
☐ Electric (Natural Gas Available)
☐ Electric (No Natural Gas Available)

Res T24 Performance

Calculation	*Heating	*Cooling	Int Lighting	Ext Lighting	Appliances	Receptacle	*IAQ	*Renewables
Standard	7.25	21.33	5.25	1.14	14.32	21.57	1.15	0.00
Proposed	4.55	25.09	5.25	1.14	14.27	21.57	1.15	-8.56

CERTIFICATE OF COMPLIANCE

Project Name: CZ 9 2 Story Example 2
Calculation Description: CZ 9
Calculation Date/Time: 2019-08-07T13:35:03-07:00
Input File Name: 2StoryExample2.rbd19
CF1R-PRF-01E (Page 1 of 11)

GENERAL INFORMATION

Item	Value	Item	Value
01 Project Name	CZ 9 2 Story Example 2	05 Standards Version	2019
02 Run Title	CZ 9	07 Software Version	CBECC-Res 2019.1.0 (1080)
03 Project Location	Based on P2 2 Story Prototype, Asphalt Shingles and PV	09 Front Orientation (deg/ Cardinal)	0
04 City	Burbank, CA	11 Number of Dwelling Units	1
06 Zip code	91506	13 Number of Bedrooms	4
08 Climate Zone	9	15 ADU Bedroom Count	n/a
10 Building Type	Single family	17 Number of Stories	2
12 Project Scope	Newly Constructed	19 Fenestration Average U-factor	0.3
14 New Cond. Floor Area (ft²)	0	21 Glazing Percentage (%)	21.1%
16 Existing Cond. Floor Area (ft²)	n/a		
18 Total Cond. Floor Area (ft²)	2700		
20 ADU Conditioned Floor Area	n/a		

COMPLIANCE RESULTS

Item	Description
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

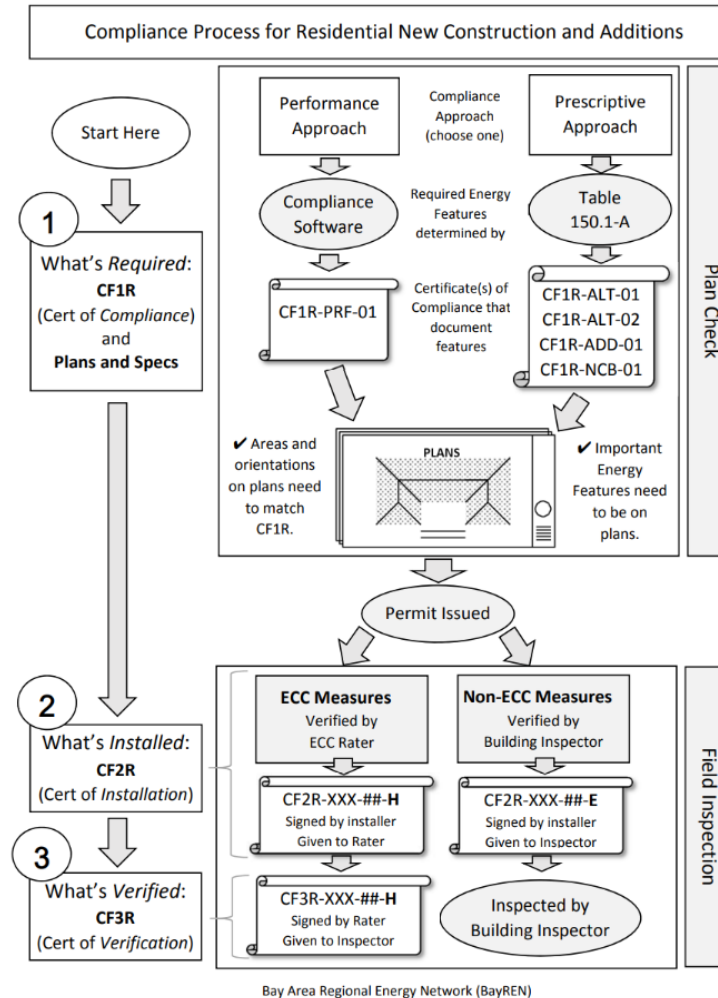
Registration Number: CA Building Energy Efficiency Standards - 2019 Residential Compliance
Registration Date/Time: HERS Provider: CBECC-Res 2019
Report Version: 2019.1.001
Schema Version: rev 20190401
Report Generated: 2019-08-07 13:36:38

Mandatory Measures must always be met regardless of the approach

- **Mandatory measures** are shown on most CF2R forms and can be found in section 150.0.
- They include things like **minimum efficiencies** for equipment and **required features** on controls.
- They also set the absolute lowest you can go on some features that might be traded off in the performance method.

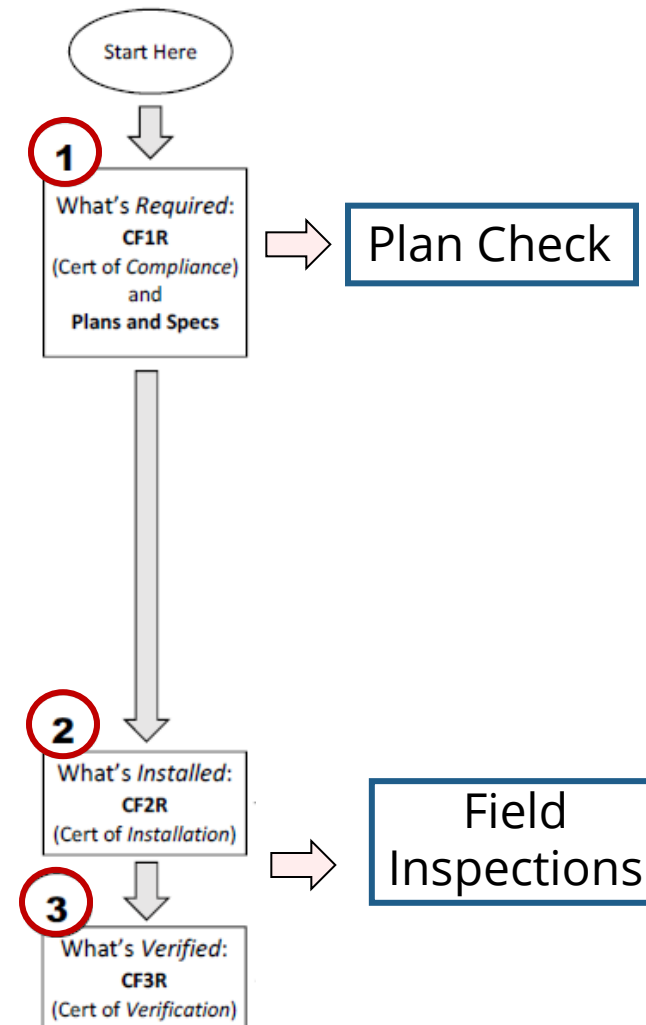
Compliance Process Flow Diagram

Refer to [full-size copy](#) provided as a handout.



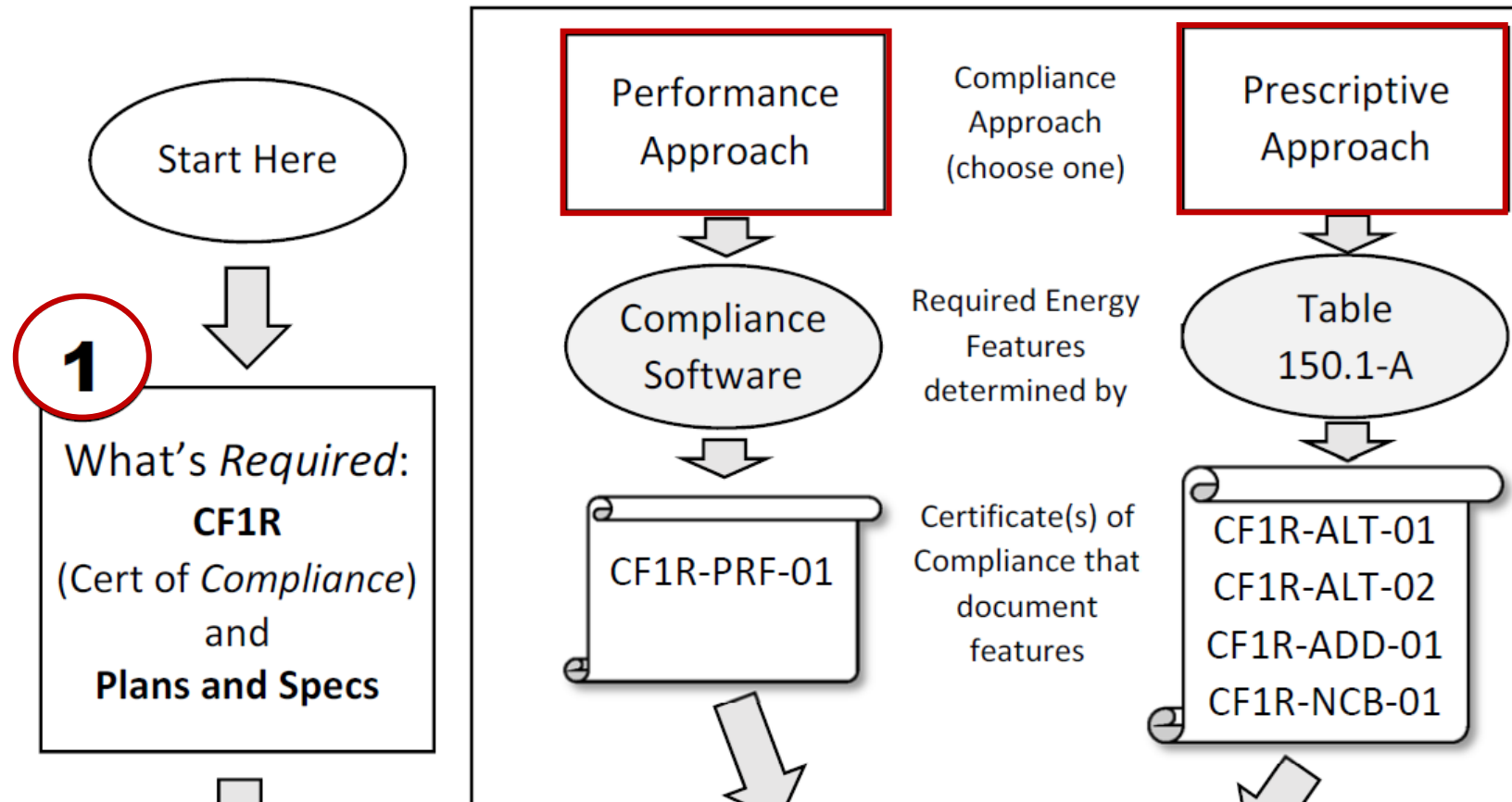
Compliance Process Flow Diagram

- Notice that the forms follow a simple 1 - 2 - 3 flow:
 - CF1R $\Rightarrow$ CF2R $\Rightarrow$ CF3R
- Notice that process is divided into Plan Check and Field Inspection sections and that **good communication must flow between them.**
- The forms are intended to facilitate this.



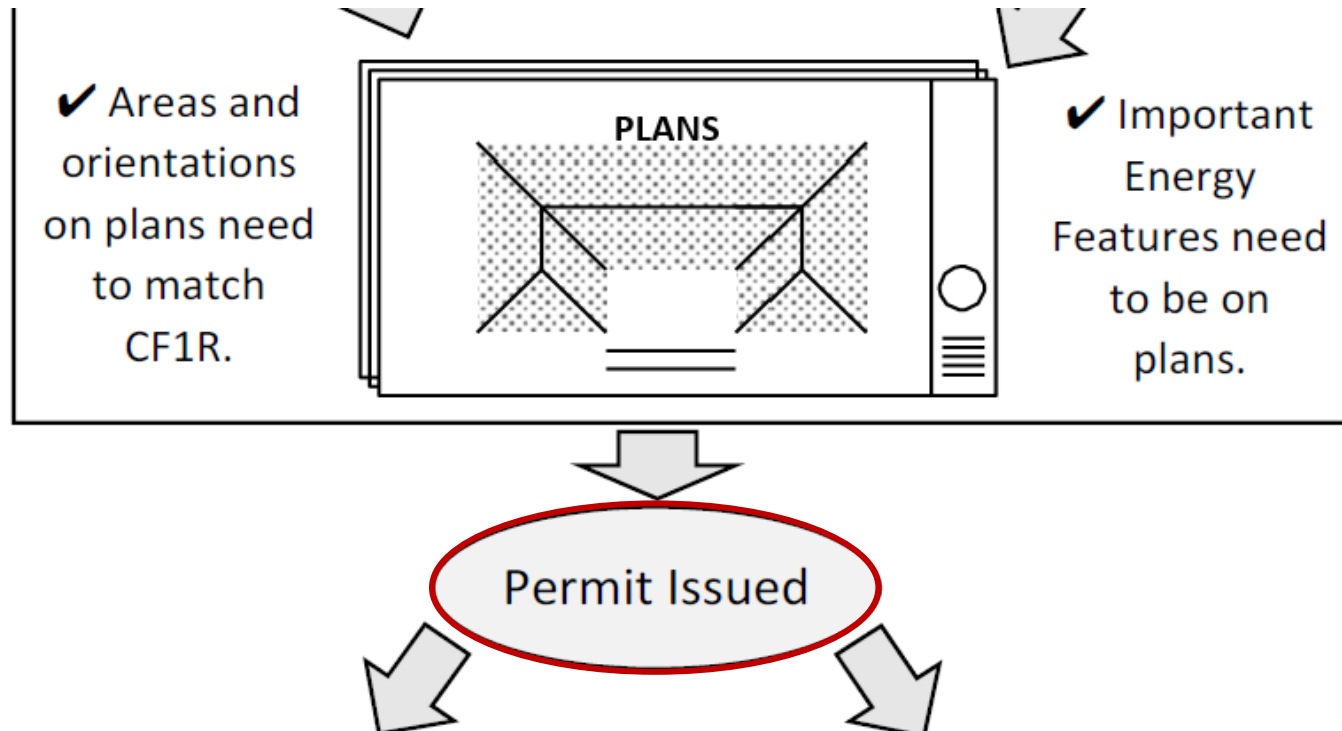
Compliance Process Flow Diagram

The document author determines which compliance approach is to be used and creates the compliance documents.



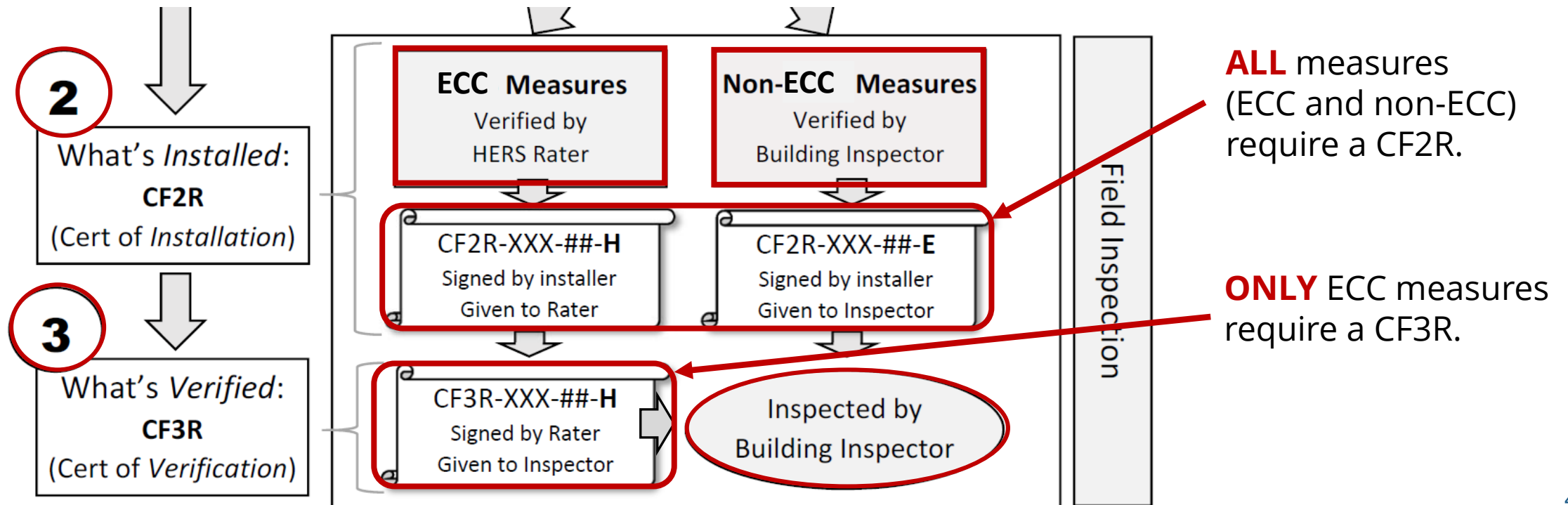
Compliance Process Flow Diagram

After the plans have been checked for accuracy and the compliance documents are verified to match, the permit is issued.



Compliance Process Flow Diagram

- The project starts and the energy features are installed.
- The responsible persons submit the supporting documents.
- The building inspector verifies that all documents have been submitted.



Energy Code Compliance Documents



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Compliance Documents List

There are LOTS of compliance documents: CF1Rs, CF2Rs, and CF3Rs.

The good news is that, thanks to the ECC Registries, **most of them are electronic.**

APPENDIX A: Compliance Documents

NOTE: For Documents and User Instructions, please visit our website at:
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2025-building-energy-efficiency>

Table A- 1: Certificate of Compliance (CF1R) Documents

Title	Category	Document Description
CF1R-ADD-01-E	Additions	Prescriptive Additions Less Than 1,000 ft ²
CF1R-ADD-02-E	Additions	Prescriptive Additions – That Do Not Require Field Verification
CF1R-ALT-01-E	Alterations	Prescriptive Alterations
CF1R-ALT-02-E	Alterations	Prescriptive Alterations HVAC
CF1R-ALT-05-E	Alterations	Prescriptive Alterations – That Do Not Require Field Verification
CF1R-ENV-02-E	Envelope	Area Weighted Average Calculation Worksheet
CF1R-ENV-03-E	Envelope	Solar Heat Gain Coefficient (SHGC) Worksheet
CF1R-ENV-04-E	Envelope	Solar Reflective Index (SRI) Worksheet
CF1R-ENV-05-E	Envelope	Alternative Default Fenestration Procedure (NA6) Worksheet
CF1R-ENV-06-E	Envelope	Interior and Exterior Insulation Layers Worksheet
CF1R-NCB-01-E	Newly Constructed Buildings	Prescriptive Newly Constructed Buildings and Additions Equal to or Greater Than 1,000 ft ²
CF1R-PRF-01-E	Performance	Residential Performance Compliance Method

Source: California Energy Commission

Table A- 2: Certificate of Installation (CF2R) Documents

Title	Category	Document Description
CF2R-ADD-02-E	Additions	Prescriptive Additions, That Do Not Require Field Verification
CF2R-ALT-05-E	Alterations	Prescriptive Alterations – That Do Not Require Field Verification
CF2R-ELC-01-E	Electrical	Electric Ready Requirements

A - 1

Description
Installation
Installation
Radiant Barrier
Leakage Diagnostic Test
g Stage
on Installation Stage
ngle Family Dwellings
tioning Systems-Performance
tioning Systems-Prescriptive
tioning Systems-Prescriptive NCB
tioning Systems-E+A+A
e Fan
Coolers
e Test
n Verification,
tioning System Fan Efficacy
tioning System Airflow Rate
r Leakage Worksheet
Charge Verification
Conditioning System Equipment
uality and Mechanical Ventilation
Design and Air Filter Grille Device ding to Tables 150.0-B or C
e Area Reduction; R-Value; Buried liance Credit
ooling compliance credit
e Fan
ilation

Document Description
Variable Capacity Heat Pump Compliance Credit
Single Dwelling Unit Hot Water System Distribution
Pool and Spa Heating Systems
Verified Single Dwelling Unit Hot Water System Distribution
Photovoltaic Systems
Battery Storage Systems
Solar Ready Areas
Minimum Solar Zone Area Worksheet
Solar Water Heating Systems

of Verification (CF3R) Documents

Document Description
Building Leakage Diagnostic Test
QII - Framing Stage
QII - Insulation Installation Stage
Verification of Existing Conditions for Residential Alterations
Duct Leakage Diagnostic Test
Duct Location Verification
Fan Efficacy
Airflow Rate
Enclosure Air Leakage Worksheet
Refrigerant Charge Verification
Rated Space Conditioning System Equipment Verification
Indoor Air Quality and Mechanical Ventilation
Return Duct Design and Air Filter Device Sizing According to Tables 150.0-B or C

A - 3

Document Description
t Surface Area Reduction; R-value; Buried ts Compliance Credit
ilation cooling compliance credit
ried Whole House Fan
hen Ventilation
able Capacity Heat Pump Compliance Credit
ried Single Dwelling Unit Hot Water System istribution

Compliance Documents

CF1R – Certificates of Compliance

Most common for New Construction

- **CF1R-PRF-01-E:** Used when the *performance* approach is used to demonstrate compliance for any kind of project (computer software).
- **CF1R-NCB-01-E:** Used when the *prescriptive* approach is used to demonstrate compliance for newly constructed homes and additions over 1,000 square feet. Typically filled out using the ECC registry.
- **CF1R-ADD-01/02-E:** Used when the *prescriptive* approach is used to demonstrate compliance for additions less than or equal to 1,000 square feet. Typically filled out using the ECC registry.

Existing + Addition + Alteration

- **CF1R-ALT-01-E:** Used to demonstrate compliance for non-HVAC alterations (roof, windows, walls, etc.).
- **CF1R-ALT-02/05-E:** Used to demonstrate compliance for HVAC alterations (change-outs, cut ins, >25 linear ft of ducts, etc.). Can be hand-filled for permit, but for final, all forms must be registered.

Compliance Documents

CF-1R – Certificates of Compliance (Worksheets)

Not used very often.

Supporting Documents

These forms, or worksheets, may be required when using the *prescriptive* approach to show the calculations used. The ECC registry will provide these when ECC verifications are required.

- **CF1R-ENV-02-E**: Envelope – Area Weighted Avg Calculation *Worksheet*
- **CF1R-ENV-03-E**: Envelope – SHGC Calculation *Worksheet*
- **CF1R-ENV-04-E**: Envelope – Solar Reflective Index (SRI) *Worksheet*
- **CF1R-ENV-05-E**: Envelope – Alternative Default Fenestration *Procedure*
- **CF1R-ENV-06-E**: Envelope – Interior/Exterior Insulation *Worksheet*
- ~~**CF1R-PLB-01-E**: Hydronic Heating System *Worksheet*~~
- ~~**CF1R-STH-01-E**: Solar Water Heating System *Worksheet*~~

Compliance Documents

CF-2R – Certificates of Installation – Non-ECC Measures (-E)

- **CF2R-ENV-01-E**: Fenestration (windows, skylights, etc.)
- **CF2R-ENV-03-E**: Insulation
- **CF2R-ENV-04-E**: Roofing products and radiant barrier
- **CF2R-LTG-01-E**: Lighting features – Single Family
- **CF2R-MCH-01-E**: Mechanical systems (HVAC)
- **CF2R-MCH-02-E**: Whole house fan
- **CF2R-MCH-04-E**: Evaporative coolers
- **CF2R-MCH-30-E**: Central Fan Ventilation Cooling System (VCS)
- **CF2R-PVB-01-E**: Documents correct PV System Installation
- **CF2R-PVB-02-E**: Documents correct Battery System Installation
- **CF2R-PLB-01-E**: Multifamily central hot water distribution systems
- **CF2R-PLB-02-E**: Single-family central hot water distribution systems
- **CF2R-PLB-03-E**: Pool and spa heating systems

Plus a few others not listed here.

Compliance Documents

CF-2R – Certificates of Installation – ECC Measures (-H)

* Most common ECC Tests

- CF2R-ENV-20-H: Envelope air leakage (blower door test)
- **CF2R-ENV-21-H: QII Framing Stage ***
- **CF2R-ENV-22-H: QII Insulation Stage ***
- **CF2R-MCH-20-H: Sealed ducts***
- CF2R-MCH-21-H: Supply duct location verification
- **CF2R-MCH-22-H: HVAC system fan efficacy (fan watt draw)***
- **CF2R-MCH-23-H: HVAC system fan airflow***
- CF2R-MCH-24-H: Enclosure Air Leakage Worksheet
- **CF2R-MCH-25-H: HVAC system refrigerant charge***
- **CF2R-MCH-26-H: Rated system verification (High SEER/EER)***
- **CF2R-MCH-27-H: Ventilation to the ASHRAE 62.2 standard***
- CF2R-MCH-28-H: Return Duct Filter Grille Design (alternative to airflow test)
- CF2R-MCH-29-H: Supply duct surface area and buried ducts verification
- CF2R-MCH-30-H: Ventilation Cooling Airflow Verification
- CF2R-MCH-31-H: Whole House Fan Airflow Verification
- **CF2R-MCH-32-H: Kitchen Ventilation***
- CF2R-PLB-21-H: Multifamily central hot water distribution systems
- CF2R-PLB-22-H: Single-family central hot water distribution systems

Plus a few others not listed here.

Compliance Documents

CF-3R – Certificates of Verification ECC

- For each **CF2R-XXX-##-H** there is a corresponding **CF3R-XXX-##-H**.
- The list of CF3Rs will look exactly like the list of CF2R-Hs.
- The ECC registry will **help you** make sure the correct CF2Rs and CF3Rs get completed and signed.

Compliance Documents

Low-Rise Multifamily and Nonresidential Documents

- For **LRMF** projects, there will be **LMCC, LMCI, LMCV** forms instead of CF1R, CF2R, CF3R forms.
- For **Nonresidential** projects, the registry will **ONLY** list the **NRCV** forms.

Compliance Documents

That's a lot of forms to keep track of!

- For residential projects, the ECC Registries will keep track of the **ALL** of the forms for you.
- For nonresidential projects, the ECC Registries will keep track of **ONLY** the ECC forms for you.

ECC & Residential HVAC Alterations

BAYREN



Source: [Bay Heating and Air Conditioning](#)

The Process – HVAC Alterations

- See handout: [Suggested Guidelines for Building Departments to Handle Permit Submittals for HVAC Alterations \(Changeouts\)](#).
- Knowing whether an ECC rater is required on the project needs to be determined as **early as possible** to prevent problems later.
- It is not required to be known prior to issuing a permit, or even performing the work, but because it can have a substantial impact on cost and scope of the project, it should be done as early as possible.
- Note that a CF1R is not required to issue a permit for an HVAC change-out but is required to close a permit.

The Process – HVAC Alterations

- The ECC Provider Registry helps to walk people through the complicated process (like “Turbo-Tax”).
- It is *recommended* that all HVAC alterations start there.
- This will help the applicant determine:
 1. Whether or not ECC verification is required;
 2. And if so, what ECC tests and compliance forms are required.
- ECC Registry provides online tracking of the process for all parties.
- It will also generate a CF1R specific to the project.

The Process – HVAC Alterations

- Only projects that require ECC verification are required to be registered with an ECC Provider.
- This includes **any alteration** that involves the installation or replacement of the following:
 - A/C condenser
 - A/C coil
 - Package unit
 - Air handler (furnace, fan coil, etc.)
 - Any refrigerant containing component
 - More than 25 feet of ducts

These all can potentially trigger duct leakage testing by the ECC Rater along with other tests, but there are exceptions.

The Process – HVAC Alterations

Exceptions to the requirement for duct leakage diagnostic test and ECC verification include:

- Duct systems that are insulated or sealed with **asbestos**.
- Duct systems that have been **previously tested** and verified for duct leakage (must be documented).
- Duct systems with **less than 40 feet** of ducts.

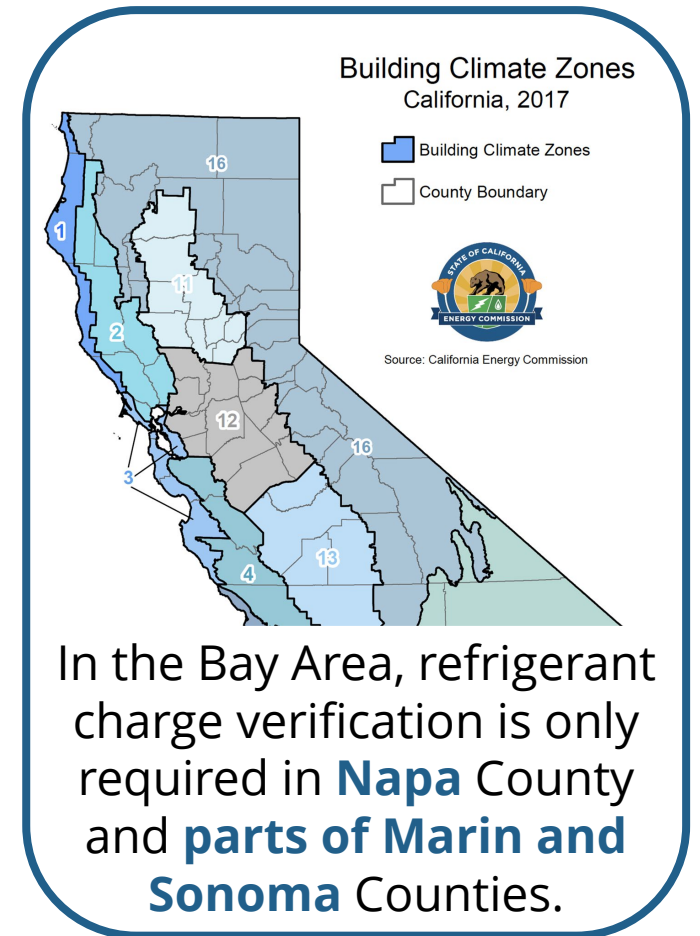
These exceptions are to be verified by the **building inspector** (especially any project claiming asbestos).

The Process – HVAC Alterations

Exceptions to the requirement for refrigerant charge verification by an ECC rater include:

- A/C* Projects NOT in climate zones 2, and 8-15.
 - Climate Zones 1, 3-7, and 16 are in milder climates and are exempt because there is less of an impact on energy use.
- Factory charged **package units**.
 - The refrigerant system is not opened as in a split system and less likely to be poorly charged.
 - A CF2R Certificate of Installation is still required.
 - The installer documents the exception with the CF2R.

*** Heat pumps require refrigerant charge in all climate zones.**



HVAC: System Types

Package System



Source: [Goodman](#)

Split System



Source: [California Heat Pump Partnership](#)

The “Ideal” Process – HVAC Alterations

1. HVAC contractor bids project.
2. Project is entered into registry to determine what ECC tests are required.
3. If contractor wins bid, the CF1R-ALT-02 is generated and signed online.
4. Contractor gets permit with the CF1R.
5. Contractor installs equipment.
6. Contractor completes and signs CF2Rs online.
7. ECC Rater performs tests.
8. ECC Rater completes and signs CF3Rs online.
9. Building Department inspects and all forms are checked for completion in registry.
10. Done!

Sampling

- Sampling is a process that allows homes to be **self-tested by the installer** and put into **groups of up to 7 homes**.
- The Rater randomly selects a house for testing, if it passes, all houses in that group pass.
- Designed for **subdivisions** and common in those projects.
- **Not allowed for new custom homes.**
- **No longer allowed for HVAC changeouts.**
- In all cases, every house is tested first by the installer. The house selected by the Rater gets tested **twice**.
- The registry will help track sampling.

Best Practices for ECC and Energy Code Enforcement



BAYREN

Best Practices: Res New Construction

- Do **not** accept **unregistered** CF1Rs for new construction.
- Make sure project can be found in appropriate registry. If not, it may be registered under the **wrong jurisdiction**.
- Check that the plans match the CF1R – especially windows!
- Use “[What to Check on a CF1R](#)” to coordinate plan checking and field inspections.
- Coordinate inspections with ECC tests.
- Before Issuing Certificate of Occupancy, **check completion of all forms in registry** (green check marks).
- Get to know your local ECC raters.

Best Practices: Res HVAC Changeouts

- Require a registered CF1R-ALT-02 at time of permit application (recommended).
- If no ECC tests are required, confirm exceptions (especially asbestos).
- Make sure project can be found in appropriate registry. If not, it may be registered under the **wrong jurisdiction**.
- **Tell the installing contractor** that you will be requiring all forms to be completed in the registry.
- Before closing out the project, confirm **completion of all forms in the registry**.
- Get to know your local ECC raters.

Best Practices: Nonres ECC Tests

- Require **NRCC** form at time of permit application.
- **NRCC** form will indicate which ECC tests are required (**NRCV** forms)
- If no ECC tests are required, confirm exceptions.
- Make sure project can be found in appropriate registry. If not, it may be registered under the **wrong jurisdiction**.
- **Tell the installing contractor** that you will be requiring all forms to be completed in the registry.
- Before closing out the project, confirm **completion of all forms in the registry**.
- Get to know your local ECC raters.

ECC Registry



Already have a CHEERS account? [Login](#)

I am a:

- | | |
|---|--|
| ☐ Homeowner | ☐ Building Department |
| ☐ Contractor / Installer | ☐ Builder |
| ☐ Energy Consultant | ☐ Architect / Designer |
| ☐ Rater (pending certification) | ☐ Rater Admin |

- Building departments have direct access to registered documents within their jurisdiction through the ECC registry.
- [Sign up](#) to get access.

Building department sign-up information

By registering you agree to CHEERS' [Terms of Use](#) and [Privacy Policy](#)

Source: [CHEERS](#)

ECC Registry Walk -Through

BAYREN



Source: [CHEERS](#)

Registry Demonstration

There is currently only **one *fully* approved ECC provider** for the 2025 Building Energy Efficiency Standards:

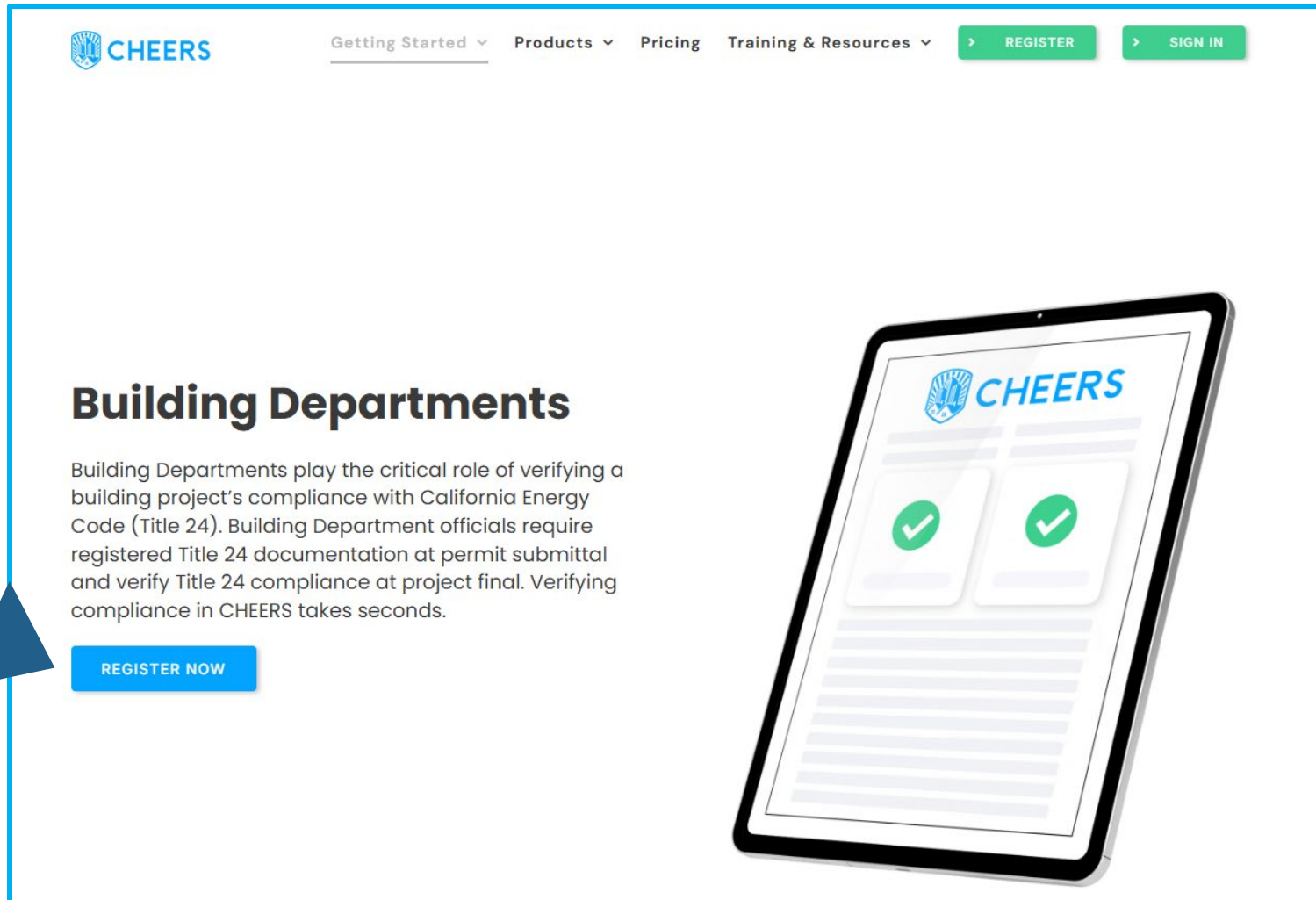
www.CHEERS.org

To note:

- CalCERTS is no longer in business.
- There is a new ECC Provider that is certified only for 2022 alterations to existing homes (HVAC Changeouts):

Golden State Registry (gsregistry.org)

CHEERS Registry – Get Registered



CHEERS Registry – Learn to Use It



Getting Started ▾

Products ▾

Pricing

Training & Resources ▾

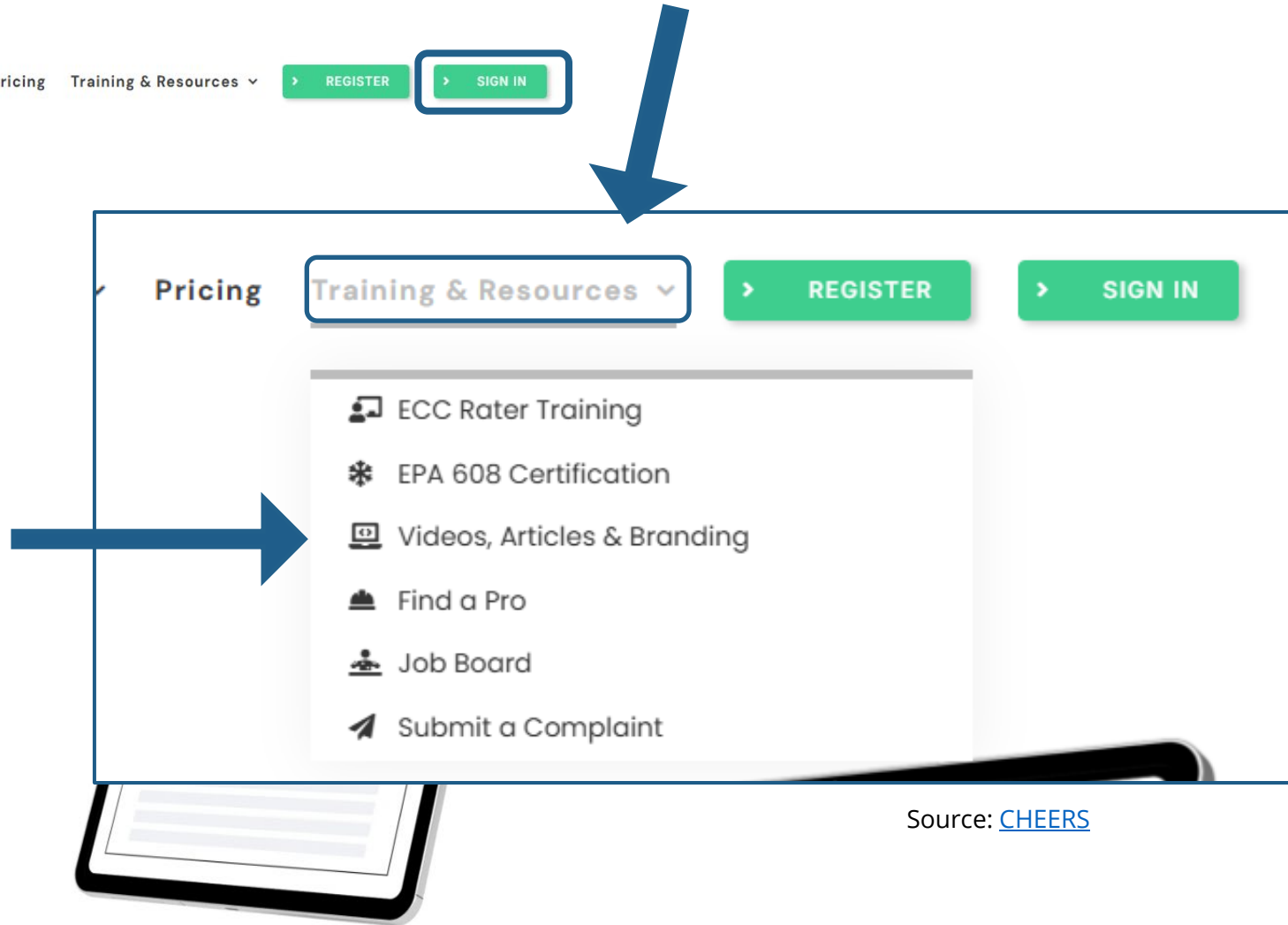
> REGISTER

> SIGN IN

Building Departments

Building Departments play the critical role of verifying a building project's compliance with California Energy Code (Title 24). Building Department officials require registered Title 24 documentation at permit submittal and verify Title 24 compliance at project final. Verifying compliance in CHEERS takes seconds.

REGISTER NOW



Source: [CHEERS](#)

CHEERS Registry– Learn to Use It



Source: [CHEERS](#)

CHEERS Registry – Find a Project

The screenshot displays the CHEERS Registry interface on a tablet. At the top, the CHEERS logo is visible. Below it, there is a blue button labeled '+ HVAC changeout'. A search bar labeled 'Search project sites' is highlighted with a red box, and a red arrow points to it. Below the search bar, a list of project entries is shown, each with an address and a status button. The entries are as follows:

Address	Status
27878 Calle Talavera, Menifee Talavera	Complete
27748 Calle Talavera, Menifee Talavera	Verification
27808 Calle Talavera, Menifee Talavera	Complete
27873 Calle Talavera, Menifee Talavera	Complete
27890 Calle Talavera, Menifee Talavera	Installation
27902 Calle Talavera, Menifee Talavera	Installation
27825 Calle Talavera, Menifee Talavera	Complete
27784 Calle Talavera, Menifee Talavera	Complete
27796 Calle Talavera, Menifee Talavera	Complete
27815 Calle Talavera, Menifee Talavera	Complete
27789 Calle Talavera, Menifee Talavera	Installation

Login into the CHEERS registry and type in the search bar.

You can search by address or permit number.

Source: [CHEERS](#)

CHEERS Registry – Project Status Report

Open the
"Project Status Report."



**CHEERS REGISTRY
PROJECT STATUS REPORT**


Scan to Validate

PROJECT SUMMARY
Project Name:
Address:
City, State, Zip:
Building Department:
Permit Number:
Building Energy Code:

Ph 003 _ Lot 043
27878 Calle Talavera
Menifee, CA 92584
Menifee, City of
PMT19-04087
2016 Standards

**HERS VERIFIABLE
MEASURES**
COMPLETE 
**ENERGY CODE
COMPLIANCE**
COMPLETE 

CERTIFICATE OF COMPLIANCE (CF1R)

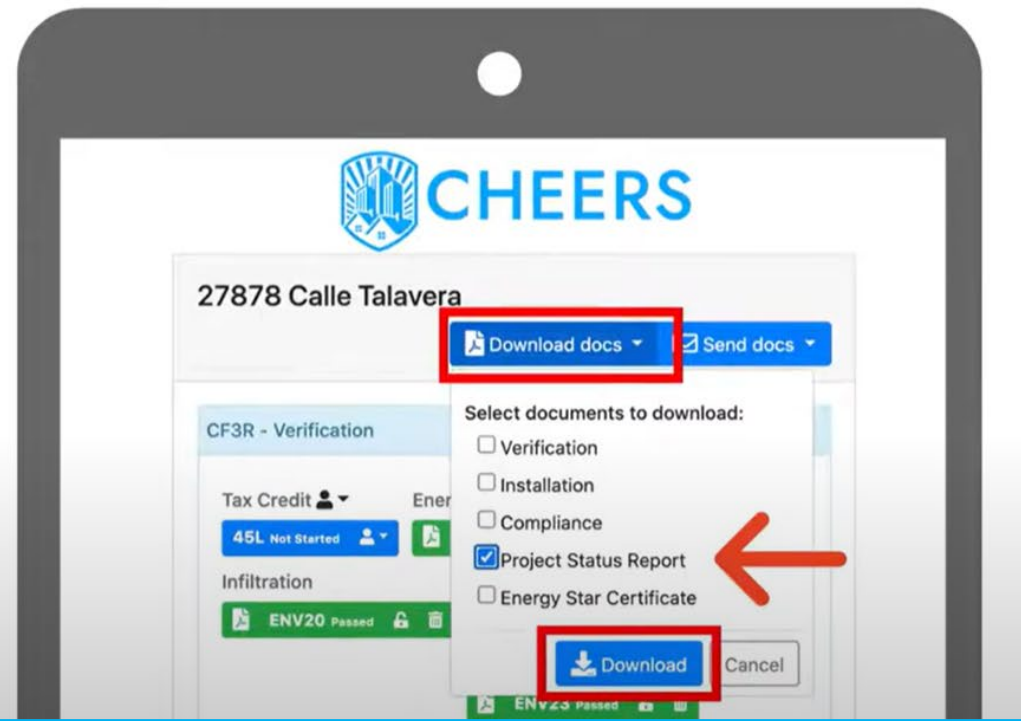
DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
05/01/2019	CF1R-PRF-01-E	Performance Compliance	419-P010041045A-000-000-0000000-0000	
South				
04/17/2020	CF1R-SRA-01-E	Solar New Construction	419-P010041045A-R01001A	

CERTIFICATE OF INSTALLATION (CF2R)

Source: [CHEERS](#)

CHEERS Registry – Project Status Report

Under Download Docs
choose
"Project Status Report."



Source: [CHEERS](#)

CHEERS Registry – Project Status Report

Look on the right side for the "Energy Code Compliance" status.



CHEERS REGISTRY
PROJECT STATUS REPORT


Scan to Validate

PROJECT SUMMARY
Project Name: Ph 0, Lot 043
Address: 77878 California
City, State, Zip: Menifee, CA 92584
Building Department: Menifee, City of
Permit Number: PMT19-04087
Building Energy Code: 2016 Standards

HERS VERIFIABLE MEASURES
COMPLETE 

ENERGY CODE COMPLIANCE
COMPLETE 

CERTIFICATE OF COMPLIANCE (CFIR)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
05/01/2019	CF1R-PRF-01-E	Performance Compliance	419-P010041045A-000-000-0000000-0000	
South				
04/17/2020	CF1R-SRA-01-E	Solar New Construction	419-P010041045A-R01001A	

CERTIFICATE OF INSTALLATION (CF2R)

Source: [CHEERS](#)

CHEERS Registry – Project Status Report



COMPLETE

means project documents are complete and meet requirements for California Energy Code compliance.



INCOMPLETE

means project documents are incomplete or do not meet requirements for California Energy Code compliance.

Source: [CHEERS](#)

CHEERS Registry – Project Status Report

CF1Rs

CF2Rs

CF3Rs



**CHEERS REGISTRY
PROJECT STATUS REPORT**


Scan to Validate

PROJECT SUMMARY
Project Name: 2273 Stratford Dr, San Jose, CA 95124
Address: 2273 Stratford Dr
City, State, Zip: San Jose, CA 95124
Building Department: Campbell, City of
Permit Number: 2024-075547 RS
Building Energy Code: 2022 Standards

HERS VERIFIABLE MEASURES
COMPLETE ✓

ENERGY CODE COMPLIANCE
COMPLETE ✓

CERTIFICATE OF COMPLIANCE (CF1R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
01/10/2025	CF1R-ALT-02-E	Residential HVAC Alterations	425-A020009523A-000-000-0000000-0000	✓

CERTIFICATE OF INSTALLATION (CF2R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
01/10/2025	CF2R-MCH-01b-E	HVAC, Ducts and Fans	425-A020009523A-000-001-M01001A-0000	✓
Location 1				
01/10/2025	CF2R-MCH-20a-H	Duct Leakage	425-A020009523A-000-001-M20002A-0000	✓
01/10/2025	CF2R-MCH-22a-H	Fan Efficacy	425-A020009523A-000-001-M22004A-0000	✓
01/10/2025	CF2R-MCH-23a-H	Airflow Rate	425-A020009523A-000-001-M23003A-0000	✓

CERTIFICATE OF VERIFICATION (CF3R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
Location 1				
01/10/2025	CF3R-MCH-20a-H	Duct Leakage	425-A020009523A-000-001-M20002A-M20A	✓
01/10/2025	CF3R-MCH-22a-H	Fan Efficacy	425-A020009523A-000-001-M22004A-M22A	✓
01/10/2025	CF3R-MCH-23a-H	Airflow Rate	425-A020009523A-000-001-M23003A-M23A	✓

 **CHEERS**

NOTICE: This compliance summary report has been generated by a registration platform provided by CHEERS using information that has been uploaded to that registration platform by third parties that are not affiliated or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this certificate.

Page 1 of 1

All Green!

CHEERS Registry – Project Status Report



CHEERS REGISTRY
PROJECT STATUS REPORT



Scan to Validate

PROJECT SUMMARY
Project Name:
Address:
City, State, Zip:
Building Department:
Permit Number:
Building Energy Code:
2022 Standards

HERS VERIFIABLE MEASURES
N/A

ENERGY CODE COMPLIANCE
INCOMPLETE

CERTIFICATE OF COMPLIANCE (CF1R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
01/10/2025	CF1R-ALT-01-E	Residential Alterations	425-A010009510A-000-000-0000000-0000	✓

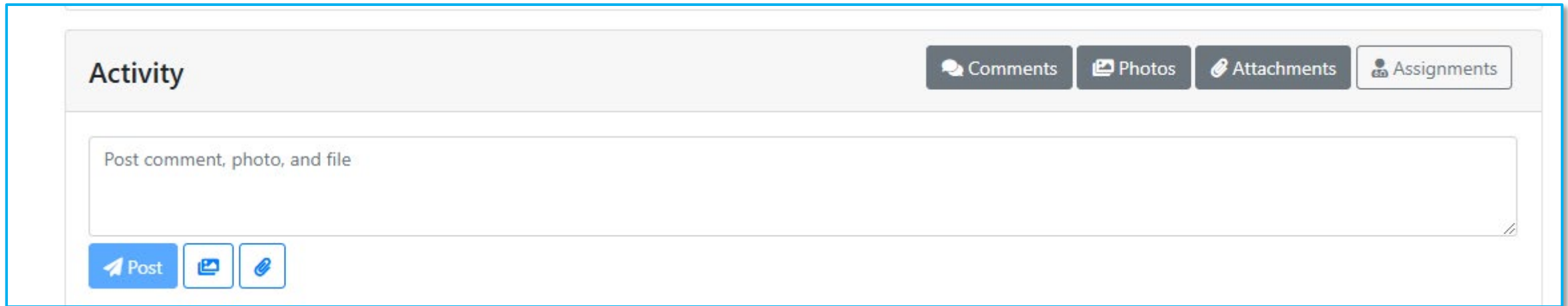
CERTIFICATE OF INSTALLATION (CF2R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
	CF2R-LTG-01-E	Lighting		✗
	CF2R-PLB-02-E	Single Family Hot Water		✗

If not, you can send them a message.

Source: [CHEERS](#)

CHEERS Registry – Send a Message



The screenshot displays the 'Activity' section of the CHEERS Registry interface. At the top, there is a header bar with the word 'Activity' on the left and four buttons on the right: 'Comments' (with a speech bubble icon), 'Photos' (with a camera icon), 'Attachments' (with a paperclip icon), and 'Assignments' (with a person icon). Below this header is a large text input area with the placeholder text 'Post comment, photo, and file'. At the bottom left of the input area, there is a blue 'Post' button with a paper plane icon, followed by two smaller square buttons: one with a camera icon and one with a paperclip icon.

To send them a message, go back to activity page and look for the "Post Comment" tool.

Source: [CHEERS](#)



Additional Resources



BAYREN

Additional Resources: Energy Code Ace



The [Forms Ace™ tool](#) helps applicants (and building departments) determine which forms apply to a project. Use this tool to identify:

- Necessary compliance steps
- The compliance path that is least cumbersome to pursue
- Which forms will be required & generate a checklist
- Whether or not a project requires ECC verification

The [Energy Code Ace Application Guides](#) are also very useful

* Resources Ace

Energy Code Ace provides resources to help facilitate effective implementation of California's building and appliance energy efficiency standards. Use our filters to find the right aide to help you "decode" Title 24, Part 6 and Title 20.



Source: [Resources Ace](#)

Additional Resources: Energy Code Ace

2025 ECC Fact Sheet

2025 Title 24, Part 6 Fact Sheet

Ace Resources™

Single-family
Just the Basics: ECC Verification

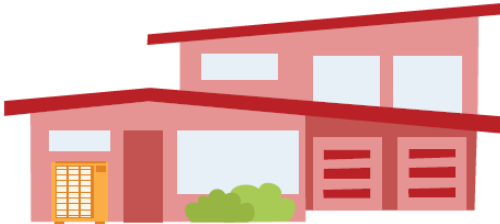
What's Included:

The 2025 California Building Energy Efficiency Standards (Energy Code or Title 24, Part 6) requires that third-party specialty inspectors called Energy Code Compliance Raters (ECC-Raters, formerly known as HERS Raters) perform field verification and diagnostic testing of certain installed building features and systems.

This fact sheet covers ECC verification and diagnostic testing required for single-family buildings, which include single-family homes, accessory dwelling units (ADUs), duplexes, and townhomes of any height. New Construction, Additions, and Alterations are also covered. An Alteration is any change to an existing home that is regulated by the 2025 Energy Code. An Addition is any change to a building that increases both conditioned floor area and conditioned volume.

Table of Contents

What Are ECC-Raters?	2
Who Does What?	4
What Forms Are Used?	5
Energy Code Requirements	6
What ECC Verifications Are Required?	7
For More Information	15



- Duct Leakage
- Building Leakage
- Refrigerant Charge
- Quality Insulation Installation (QII)
- Air Flow/Fan Efficacy

Scan me to view the full fact sheet online!



Examples of ECC Measures in a Single-family Home

EnergyCodeAce™

2025 Title 24, Part 6 | Single-family ECC Verification
Page 1 of 16

www.energycodeace.com

Additional Training



BayREN Trainings: [BayREN.org/code-compliance/training](https://bayren.org/code-compliance/training)

- Free, in-person or live online sessions for building department staff
- Usually, 60-90 minutes to fit with a staff meeting or lunch
- Topics include: Navigating the Energy Code, Residential Alterations, Nonresidential New Construction, Heat Pump Water Heaters, and more



Energy Code Ace Trainings: <https://energycodeace.com/training>

- Free training at the Pacific Energy Center or on-site
- Usually half-day or full-day in-depth classes for different audiences
- Includes full day trainings for Plans Examiners and Building Inspectors on the Residential Standards and Nonresidential Standards

Thank you for attending!

- Contact information:
 - BayREN Codes & Standards Program
 - www.bayren.org
 - codes@bayren.org

Questions about Title 24?

3C-REN offers a *free* Code Coach Service



Online:
3c-ren.org/code

Call:
805.781.1201

Energy Code Coaches are local experts who can help answer your Title 24 Part 6 or Part 11 questions.

They can provide code citations and offer advice for your res or non-res projects.

Closing



Continuing Education Units Available

- Contact dresurreccion@co.slo.ca.us for AIA and ICC LUs

Coming to Your Inbox Soon!

- Slides & Recording

Other Upcoming Courses:

- [8/13 HPWH Installation Training in Oxnard \(in-person\)](#)
- [8/19 Ask the Experts: Energy Compliance & Modeling](#)
- [8/20 Introduction to Residential HVAC Design](#)
- [9/1 2025 Energy Code: Multifamily Ventilation](#)

Any phone numbers who joined? Please share your name!

