

## **Residential Prescriptive Flowchart**

### **DESIGN TEAM**

Determine which Title 24, Part 6 requirements and CF1R forms are applicable.

### **DESIGN TEAM**

Determine if HERS verification is required.

### **DESIGN TEAM**

Complete and register the required CF1R forms, as applicable.

### **DESIGN TEAM**

Incorporate the CF1R forms in the construction documents for compliance verification.

# DESIGN

### **PLANS EXAMINER**

Issue approval to commence construction after compliance is verified.

### **DESIGN TEAM**

Pick up plan check comments, make revisions if necessary and resubmit to the building department.

### **PLANS EXAMINER**

Review the CF1R forms and construction documents for compliance during plan check.

### **DESIGN TEAM**

Submit construction documents, including forms, to the building department for plan check.



### **CONTRACTOR**

Obtain a copy of the CF1R forms with the construction documents.

#### CONTRACTOR

Determine if HERS verification is needed and include its costs in the bid and related time in the schedule.

#### CONTRACTOR

Determine which CF2R and CF3R forms will be needed when the building inspector arrives.

### INSTALLER/ATT/ RATER

Complete and register the CF2R and CF3R forms, as applicable.



Give the document package to the building owner.

### **INSPECTOR**

In the field, verify that the CF1R, CF2R and CF3R forms comply and issue a certificate of occupancy.

#### **CONTRACTOR**

As applicable, have the registered CF2R and CF3R forms complete and ready for the building inspector.









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## **Step 1 of 15**



### **DESIGN TEAM:**

Determine which Title 24, Part 6 requirements and CF1R forms are applicable.

- 1. Energy Code Ace fact sheets, trigger sheets and application guides can help direct you to which sections of the Energy Code apply to your project scope. The Reference Ace™ offers convenient, electronic access to the language of these sections.
- 2. A list of approved compliance software is found on the Energy Commission website.

### **Tips & Tricks**

Energy Code Ace provides no-cost training tailored to industry professionals involved in the compliance process. Courses for plans examiners, building inspectors, energy consultants, architects, contractors and others are provided in a variety of in-person and online formats to match your learning needs and schedule.

- The Forms Ace™ helps identify which forms apply to a given scope of work.
- 4. Each discipline is responsible for completing the CF1R forms applicable to its scope of work. Coordinate with the rest of the design team to ensure that all applicable forms are completed.









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## **Step 2 of 15**



### **DESIGN TEAM:**

Determine if HERS verification is required.

Does your project require a Home Energy Rating System (HERS) Rater? Find out by using the Energy Code Ace *Just the Basics: Nonresidential and Residential HERS Measures* fact sheet or the Forms Ace™.

If your project is an Addition or Alteration that does not require HERS verification, include a CF1R form without a watermark in the construction documents. More detail on this can be found in the next step of this process.

- 2. If your project triggers a HERS verification, you can find a HERS Rater by visiting the California Energy Commission's HERS Program web page. A fee may apply when registering the CF-1R form.
- If your project is a minor Alteration that does not require building plans to be submitted, you may consider pursuing the Prescriptive Approach instead of the Performance Approach.
- 4. Early collaboration among the building owner, HERS Rater and contractor is necessary to ensure that schedule and budget impacts are considered in the project bid.

Energy Code Ace has created Note Blocks that address HERS requirements within the construction documents to help subcontractors include time for HERS verifications in their bids.

### **Tips & Tricks**

Confused by form names? The Finding Compliance Forms fact sheet includes a key to them as well as information on how to locate the forms you need.









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## **Step 3 of 15**



### **DESIGN TEAM:**

Complete and register the required CF1R forms, as applicable.

- Before applying for a building permit, the CF1R form must be registered with a Home Energy Rating System (HERS) provider if the project requires HERS verification per the Energy Code (Mandatory for all newly constructed buildings).
  - If your project is an Addition or Alteration that does not require a HERS verification, you can use the CF1R-ADD-02 form for Additions or the CF1R-ALT-05 form for Alterations. These forms can be found on EnergyCodeAce.com.
  - To review the language in Section 10-103(a)2, use the Reference Ace™.
- If your project is a minor Alteration that does not require building plans to be submitted, the CF1R form does not have to be registered until the permit is final.
- 3. After you register the CF1R form, the watermark disappears and a registration number is shown in the footer of the document you download to include on the plan set.









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**Tips & Tricks** Maintain a good relationship with your plans examiners! Let them know that you are willing to answer any questions or concerns

to help the process go smoothly. It is

helpful to include a cover letter with

simply call you with questions rather

than requiring a resubmittal, saving

everyone's time and money.

Title 24, Part 6 documents about

modeling issues, work-arounds, notes of concern or other important details and your contact information. The plans examiner may be able to

## **Prescriptive Compliance Path**

## **Step 4 of 15**



### **DESIGN TEAM:**

Incorporate the CF1R forms in the construction documents for compliance verification.

- Make sure that all relevant documents are included in the permit application package. Each building department has different requirements to apply. If you are unsure of these requirements, contact the building department before submitting your permit application.
  - Building department permit fees vary, and many departments publish a fee schedule on their websites. Some jurisdictions may offer online permit options, which can reduce permit fees.
- You can incorporate the CF1R forms in the documents in a variety of ways. You can insert a PDF or JPEG file into the drawing set, but make sure it is readable and that you follow all related building department rules. Many building departments state that 12 point is the smallest font size allowed.
- Registered Home Energy Rating System (HERS) documents should be "unlocked" for easier incorporation into CAD programs. Many free software services are available to convert a locked PDF to a JPFG.
- Building departments have access to all forms that have been uploaded to the HERS Registry. To find project information, look on the footer of the forms.









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## **Step 5 of 15**



### **DESIGN TEAM:**

Submit the construction documents, including forms, to the building department for plan check.

1. To ensure your permit application is complete before submitting it to the building department, review the Energy Code Ace checklist for plans examiners.

Energy Code Ace offers a number of other resources to assist the design team in proper preparation of documents.

- Quick access to the Energy Code is available through the Reference Ace™
- Energy Code Ace trigger sheets, fact sheets and application guides help "decode" Title 24, Part 6 requirements for a wide array of measures

### **Tips & Tricks**

Turnaround times for plan checks vary widely among jurisdictions, anywhere from weeks to months. Inquire ahead of time in order to include sufficient time in the project schedule.









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## **Step 6 of 15**



### **PLANS EXAMINER:**

Review the CF1R forms and construction documents for compliance during plan check.

1. The plans examiner reviews the construction documents and the CF1R forms for Energy Code compliance.

Many resources are available to guide the design team in proper preparation of documents and assist plans examiners as they review them.

- Checklists for plans examiners help ensure Energy Code requirements are met
- Quick access to the Energy Code is available through the Reference Ace™
- Energy Code Ace fact sheets, trigger sheets and application guides help "decode" Title 24, Part 6 requirements for a wide array of measures

**Tips & Tricks** 

Energy Code Ace provides no-cost training tailored to industry professionals involved in the compliance process. Courses for plans examiners, building inspectors, energy consultants, architects, contractors and others are provided in a variety of in-person and online formats to match your learning needs and schedule.









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## Residential **Prescriptive Compliance Path**

## **Step 7 of 15**



### **DESIGN TEAM:**

Pick up plan check comments, make revisions if necessary and resubmit to the building department.

- 1. Plans examiners often have questions or comments about verification which require a response and/or resubmittal of documents. Ask your local building department if fees apply.
- 2. If you need help finding the Energy Code requirements or understanding common applications to respond to comments from the plans examiner, the Energy Code Ace Reference Ace<sup>TM</sup> and application guides may be helpful.

### **Tips & Tricks**

Experience matters! The first few times going through this process may be a learning experience, but establishing a positive relationship with your local building department and taking note of lessons learned eases the process over time.









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## **Step 8 of 15**



### **PLANS EXAMINER:**

Issue approval to commence construction after compliance is verified.

1. After compliance is verified, the building department issues a stamped set of approved plans to the design team that documents jurisdictional consent to begin construction.

## **Tips & Tricks**The Energy Code Ace

Residential Plans Examiner checklist can help to confirm compliance. It is a dynamic form including specific questions that a plans examiner typically asks when determining if a project complies with the Energy Code, a summary of the relevant forms and references to the relevant code sections.









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## **Step 9 of 15**



### **CONTRACTOR:**

Obtain a copy of the CF1R forms along with other construction documents.

## **Tips & Tricks**

It is important to note that when any subcontractor or installer changes during the project, forms must be registered to the HERS Registry. This includes members of the design team and even installers or contractors who have finished their scope of work. Anticipate continued participation in the Registry for the duration of the project and incorporate it in the budget and schedule.

The CF2R forms are considered "Installation" forms and documents what was installed. The installer of a feature completes the applicable form. For instance, an insulation installer would complete the CF-2R-ENV-03-E, Insulation Certificate of Installation.

The CF3R forms are considered "Verification" forms and documents what was verified in the field.
A HERS Rater completes these forms through the HERS registry.

- Team Coordination: The builder and any subcontractors should be invited to the project via the Home Energy Rating System (HERS) Registry. New users will need to register on the Registry site.
- 2. The design team turns over construction documents, including the CF1R forms and the building permit, to the general contractor. Be sure that any HERS measures or other Title 24, Part 6-specific information is clearly spelled out on the construction documents.
- 3. The general contractor should confirm that all information on the compliance forms is incorporated into the schedule and cost estimates.
- 4. Team Coordination:
  - Contact the documentation author if there are questions about how the design complies
  - The documentation author is noted on the last page of the CF1R form
  - The Forms Ace™ can help you determine which Title 24, Part 6 forms are applicable to your specific project
- 5. The building permit and other relevant documents should remain posted onsite for the duration of the project. Posting requirements can vary among departments, so check with your jurisdiction to confirm its posting requirements.









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## **Step 10 of 15**



### **CONTRACTOR:**

Determine if HERS verification is needed and include its costs in the bid and related time in the schedule.

- Identify whether Home Energy Rating System (HERS) verification is needed by checking the CF1R forms to see if any include a HERS registration number. The registration number can be found in the footer of the completed form, which is included in the construction document package from the designer.
- 2. If HERS verification is required, coordinate with a HERS Rater as early as possible to understand fees and schedule impacts, and build these into the project bid. Ask the designer if a HERS Rater was engaged during the design process. If not, contact one of the California Energy Commission-approved HERS Providers to find a HERS Rater.
- 3. Carefully review HERS verification requirements with the HERS Rater to ensure that all impacts to the project schedule and costs are considered, including:
  - Sequencing installation to coincide with access required for testing
  - Scheduling site visits well in advance
  - Understanding general contractor, installer and HERS Rater roles and responsibilities
  - For more information about HERS, see the Energy Code Ace fact sheet HERS: Just the Basics 2019









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## **Step 11 of 15**



### **CONTRACTOR:**

Determine which CF2R/ CF3R forms will be needed when the building inspector arrives.

1. The general contractor and all subcontractors on the construction team must join the project on the Home Energy Rating System (HERS) Registry if HERS verification is required.

Changes to the project can trigger resubmittal of the CF2R and CF3R forms on the HERS Registry, and may require signatures from various members of the team. It is the general contractor's responsibility to ensure that forms are accurate and signatures are current for form resubmittal.

Triggers may include:

- Installed equipment is changed from specification
- Installer or subcontractor changes from the original signatory
- Applicable CF2R and CF3R forms may be required to be posted onsite during construction and inspections. The HERS Registry can provide a list of necessary HERS related forms, and the Forms Ace™ can provide a complete list of all applicable Energy Code forms.
- Inspection requirements vary by jurisdiction. Check with your local building department to find out what needs to be inspected and when, as well as whether additional forms are required to be posted onsite.

### **Tips & Tricks**

Maintaining a good relationship with local building inspectors eases the inspection process. Becoming familiar with a jurisdiction's scheduling availability, access requirements for specific building details and which documents to have available will help inspections to go smoothly the first time.









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## **Step 12 of 15**



## **INSTALLER AND/OR HERS RATER:**

Complete and register the CF2R and CF3R forms, as applicable.

- Coordination with the general contractor is necessary to access the project in the Home Energy Rating System (HERS) Registry if HERS verification is required. The installer completes the applicable CF2R forms in the Registry and keeps hard copies onsite. If HERS verification is not required, CF2R forms may be filled out by hand and kept onsite. You can access the non-HERS CF2R forms on EnergyCodeAce.com.
- The HERS Rater completes the applicable CF3R forms in the HERS Registry. Check with your local jurisdiction to find out if hard copies are required onsite for the inspector.
- Building inspectors have access to all projects on the HERS Registry and can locate a project by finding the registration number in the footer of the completed forms.
- The Image Ace™ includes pictures of Energy Code-compliant (and sometimes non-compliant) installations.









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## **Step 13 of 15**



### **CONTRACTOR:**

As applicable, have the registered CF2R and CF3R forms completed and ready for the building inspector.

- Keep a hard copy of the completed CF2R and CF3R forms posted onsite for the duration of the project.
- The inspector will verify the compliance forms onsite. Not having these forms available may require rescheduling the inspection. Often the inspector will visit the site multiple times per project.
  - Coordinate with the local building department to confirm when specific forms should be posted.
- Although jurisdictions are not required to collect forms, some may take them.









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## **Step 14 of 15**



### **INSPECTOR:**

In the field, verify that the CF1R, CF2R and CF3R forms comply and issue a certificate of occupancy.

- The building inspector verifies that registered CF1R, CF2R and CF3R forms are current with what is installed.
- Although jurisdictions are not required to collect forms, some may take them.
- Building inspectors have access to all projects on the Home Energy Rating System (HERS) Registry, and can locate a project by finding the registration number in the footer of the completed forms.
- 4. The Image Ace™ includes pictures of Energy Code-compliant (and sometimes non-compliant) installations.
- Inspectors can use the Energy Code Ace Residential Building Inspector Checklist to focus on high priority inspection items. Notes from the plans examiner can also be used to prioritize field verification.









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## 2019 ENERGY CODE



## Residential **Prescriptive Compliance Path**

## **Step 15 of 15**



### **CONTRACTOR:**

Give the document package to the building owner.

1. Upon project completion, the general contractor or design team is required to leave Certificates of Compliance, Installation and Verification with the building owner. For more information on documentation required to demonstrate compliance, review the Title 24, Part 1 (Section 10-103(a)) administrative regulation requirements in the Reference Ace<sup>TM</sup>.









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