

# Butte County Department of Development Services

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ADMINISTRATION \* BUILDING \* PLANNING

## Re-Roofing and the 2008 California Residential Energy Compliance Requirements for Cool Roofs

**Important information you need to know BEFORE obtaining a re-roof permit!**

*The California Energy Commission (CEC) has adopted new requirements for re-roofing projects.*

Beginning **January 1, 2010** when more than 50% of the exterior surface of the roof or more than 1,000-sq. ft. of roof is replaced, whichever is less, the roofing product must meet the following prescriptive requirements for Cool Roofs.

**For roof slopes of greater than 2:12:**

1. Roofing products with a density of less than 5lbs/sq.ft. (i.e. Asphalt shingles) shall have a minimum 3-year aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a Solar Reflectance Index (SRI) of 16.
2. Roofing products with a density of 5lbs/sq.ft. or more (i.e. Concrete, clay tiles or slate) shall have a minimum 3-year aged solar reflectance of 0.15 and a minimum thermal emittance of 0.75, or a SRI of 10.

Or,

**Alternatives to the Cool Roof requirement may be one of the following:**


1. Insulation with a thermal resistance of at least 0.85hr.ft<sup>2</sup>.°F/Btu or at least ¾ inch air-space is added to the roof deck over an attic; or
2. If existing ducts in the attic are insulated and sealed according to CEC Regulations §151(f)10 ; or
3. Buildings with at least R-30 ceiling insulation; or
4. If the building with a radiant barrier in the attic meeting the requirements of §151(f)2 ; or
5. Buildings with no ducts in the attic; or
6. If in climate Zones 10, 11, 13, and 14, R-3 or greater roof deck insulation above vented attic.
7. Roof areas covered by integrated photovoltaic panels and building integrated solar panels and existing roof areas that have a thermal mass over the roof membrane with a weight of at least 25 lb/ft<sup>2</sup> are exempted for this requirement.

A Certificate of Compliance Energy Form "**CF-1R-ALT**" must be **completed and submitted with the permit application**. The "CF-1R-ALT" form must be signed by the documentation Author and the Building Designer (i.e. Contractor or Home Owner).

At **Final Inspection** an Installation Certificate Form "**CF-6R-ENV-01**" must be completed by the installing contractor and submitted to the owner and the building department.

Roofing products that are used for compliance with the energy standards are required to be tested and labeled by the Cool Roof Rating Council (CRRC).

The roofing products manufacturer must have its roofing product tested for solar reflectance and thermal emittance, and be listed in the CRRC's Rated Product Directory (see <http://www.coolroofs.org>) and be labeled according to CRRC procedures. Below is an example of an approved CRRC product label.

	<u>Initial</u>	<u>Weathered</u>	
	<b>Solar Reflectance</b>	<b>0.00</b>	<b>Pending</b>
	<b>Thermal Emittance</b>	<b>0.00</b>	<b>Pending</b>
	<hr/>		
Rated Product ID Number		-----	
Licensed Seller ID Number		-----	
Classification	Production Line		
<p>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.</p> <p>Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</p>			

Attached are the CF-1R-ALT and the CF-6R-ENV-01 forms for your use. Or you can visit the California Energy Commissions webpage at: [www.energy.ca.gov](http://www.energy.ca.gov) for more information.





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ADMINISTRATION \* BUILDING \* PLANNING  
**COOL REROOF INFORMATION SHEET**

Project Address: \_\_\_\_\_

Slope of Roof \_\_\_\_\_ # of Existing Layers \_\_\_\_\_ Existing Roofing Material \_\_\_\_\_

Check all that applies to NEW roof:

<input type="checkbox"/>	Composition	<input type="checkbox"/>	Tile	<input type="checkbox"/>	Shake	<input type="checkbox"/>	Wood Shingle
<input type="checkbox"/>	Built up	<input type="checkbox"/>	Bitumen	<input type="checkbox"/>	Metal	<input type="checkbox"/>	Other _____
<input type="checkbox"/>	Tear off existing	<input type="checkbox"/>	Overlay	<input type="checkbox"/>	New Sheathing	<input type="checkbox"/>	_____

The California Energy Commission (CEC) has adopted new requirements for re-roofing projects.

Beginning **January 1, 2010** when more than 50% of the exterior surface of the roof or more than 1,000-sq. ft. of roof is replaced, whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of §152(b)1Hi, 152(b)1Hii, or 152(b)1Hiii.

For roof slopes of greater than 2:12:

<input type="checkbox"/>	Roofing products with a density of <b>less than</b> 5lbs/sq.ft. (i.e. Asphalt shingles) shall have a minimum 3-year aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a Solar Reflectance Index (SRI) of 16. <b>or check alternate (alt)</b>	<input type="checkbox"/>	Roofing products with a density of 5lbs/sq.ft. or <b>more</b> (i.e. Concrete, clay tiles or slate) shall have a minimum 3-year aged solar reflectance of 0.15 and a minimum thermal emittance of 0.75, or a SRI of 10. <b>or check alternate (alt)</b>
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**Note:** Manufacturers specification for Cool Roof compliance when required shall be provided for inspector. Packaging materials w/CRRC labels must be left on the job site to demonstrate compliance with the specification for the cool roof rating if applicable.

**ALTERNATE (ALT) Alternatives to §152(b)1Hi and §152(b)1Hii, Steep-slope roof (pitch > 2:12)**

Alternatives to the Cool Roof requirement may be **one** of the following:

alt <input type="checkbox"/>	Building with at least R-30 ceiling insulation (approximately 11" (or more) thick if blown in)	alt <input type="checkbox"/>	If in climate Zone 11*, R-3 or greater roof deck insulation above vented attic.
alt <input type="checkbox"/>	Existing ducts insulated with R-6 and H.E.R.S. duct tested to verify ducts are sealed	alt <input type="checkbox"/>	Building has no HVAC ducts in the attic (evaporative cooling duct exempt)
alt <input type="checkbox"/>	Building with a radiant barrier in attic meeting the requirements of §151(f)2;	alt <input type="checkbox"/>	Insulation over roof deck or at least ¾ inch air-space is added to the roof deck over an attic

**Other Exceptions**

- Roofing area covered by building integrated; photovoltaic panels and solar thermal panels are exempt from the below Cool Roof criteria.
- Roof constructions that have thermal mass over the roof membrane with at least 25 lb/ft2 is exempt from the below Cool Roof criteria.

\* Butte County areas within **Climate Zone 11** per T-24, Part 6, 2008 California Energy Code: Bangor, Berry Creek, Biggs, Centerville Powerhouse, Cherokee, **Chico**, Cohasset, Dayton, De Sabla, Durham, East Biggs, Forest Ranch, Gridley, Honcut, Lake Oroville, Lake Wyandotte, Las Plumas, Magalia, Nelson, Nord, Oroville, Oroville East, Palermo, **Paradise**, Pentz, Richardson Springs, Richvale, south Oroville, Thermalito, Thermalito Afterbay, Thermalito Forebay, Tiger Creek Powerhouse and Wyandotte.

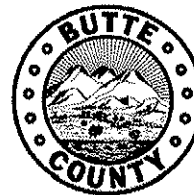
**CLIMATE ZONE 16 (ONLY)** Cool roof requirements apply **ONLY** when Roofing products with a density of 5lbs/sq.ft. or **more** (i.e. Concrete, clay tiles or slate) shall have a minimum 3-year aged solar reflectance of 0.15 and a minimum thermal emittance of 0.75, or a SRI of 10.  
**or check alternate (alt)** as applicable.

**INSTRUCTIONS FOR COMMERCIAL PROJECTS**

- Commercial roofs on decks with a slope of 2:12 or less must meet the 2008 Building Energy Efficiency Standards by being a certified Cool Roof. A copy of the standards, signed by the applicant must accompany this application.
- Overlays that exceed 100 pounds per square must be accompanied by calculations performed by a California licensed Civil or Structural Engineer. All overlays must be approved by the Building Official and other requirements listed within Appendix Chapter 15, California Building Code.
- A specification from the roofing manufacturer must accompany this application. The specification should list the fire class of the material, a description of the materials or layers that must be installed, the Cool Roof certification (if required because of the slope of the roof), and installation requirements.
- Packaging materials w/CRRC labels must be left on the job site to demonstrate compliance with the specification for the cool roof rating if applicable.

I agree that the information provided on this document is accurate and true.

Applicants Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**ADMINISTRATION \* BUILDING \* PLANNING**  
**CF-6R-ENV-01- ROOFING**

<b>INSTALLATION CERTIFICATE</b>		<i>(Revised for roofing only)</i> <b>CF-6R-ENV-01</b>
<b>Envelope – Roofing</b>		
<b>Site Address:</b>	<b>Enforcement Agency:</b>	<b>Permit Number:</b>

*If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible; alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures with check boxes require to be checked to ensure the mandatory measures have been met.*

**ATTIC ROOF INSULATION AND/OR ATTIC RADIANT BARRIER**

Material: \_\_\_\_\_ Brand Name: \_\_\_\_\_  
 Material: \_\_\_\_\_ Brand Name: \_\_\_\_\_  
 Thickness (inches): \_\_\_\_\_ Thermal Resistance (R-Value): \_\_\_\_\_  
 §118(a): Insulation installed meets Standards for Insulating Material.  
 §150(g): Mandatory Vapor barrier installed in Climate Zone 16

Description of Roofing Products									
CRRC Product ID Number	Manufacturer Information	Brand/Model	Product Type	Roof Area	Roof Slope	Product Weight 2	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance
1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at <a href="http://www.coolroofs.org/products/search.php">www.coolroofs.org/products/search.php</a> 2. The weight in lbs per square feet of the roofing product being installed. 3. Check box if the Aged Reflectance is a calculated value using the equation below, footnote 4. 4. If the aged reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the initial reflectance value from the directory and use the equation $(0.2+0.7(p_{initial} - 0.2))$ to obtain a calculated aged value.									
<input checked="" type="checkbox"/> <b>CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENT:</b>									
<input type="checkbox"/> The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the above Cool Roof criteria.									
<input type="checkbox"/> Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft <sup>2</sup> is exempted from the above Cool Roof criteria.									
To apply Liquid Field Applied Coatings, the coating must be applied with a minimum dry mil thickness of 20 mils across the entire roof surface and meet minimum performance requirements listed in §118(i)3 and Table 118-C. Select the applicable coating									
<input type="checkbox"/> Aluminum-Pigmented Asphalt Roof Coating <input type="checkbox"/> Cement-Based Roof Coating <input type="checkbox"/> Other _____									
<input checked="" type="checkbox"/> <b>CRRC-1 Label Attached to CF-6R</b> (Note if no CRRC-1 label is available, this compliance method cannot be used and another method is required to meet compliance).									

**DECLARATION STATEMENT**

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)		
Responsible Person's Name:	Responsible Person's Signature:	
CSLB License:	Date Signed:	Position With Company (Title):



**BUTTE COUNTY  
DEPARTMENT OF DEVELOPMENT SERVICES  
BUILDING PERMIT APPLICATION\***  
Phone: (530) 538-7601 Fax (530) 538-7785  
[Website: www.buttecounty.net/dds](http://www.buttecounty.net/dds)

PERMIT NO:	FORM NO
BIN NO:	DBP-1

*Payment of Fees Required at Time of Application*

**PLEASE PRINT CLEARLY**

PROPERTY OWNER INFORMATION		
Last Name	First Name	
Mailing Address		
City	State	Zip
Phone	Fax	
Email	Cell	

PROJECT LOCATION
APN
Property Address
City Location must not be in the city limits of Chico, Gridley, Oroville or Paradise, click below for parcel information <a href="http://qismaps.buttecounty.net/flexviewer/bcdatasearch/index.html">http://qismaps.buttecounty.net/flexviewer/bcdatasearch/index.html</a>

CONTRACTOR		
Name		
Mailing Address		
City	State	Zip
Phone	Fax	
Email	Cell	
License No.	Class	

WORKER'S COMPENSATION
Policy Number
Carrier
If hiring other than a licensed contractor, a certificate of worker's compensation must be shown at the time of permit issuance

LENDING AGENCY		
Name		
Mailing Address		
City	State	Zip

ARCHITECT/ENGINEER		
Name		
Mailing Address		
City	State	Zip
Phone	Fax	
Email	Cell	
CA State License No.		

DESCRIPTION OR SCOPE OF WORK
Mobile Home permits (other than installation, foundation, utilities & non-attached structures) are issued by the State. Tell staff if this permit is for a Mobile Home. Click below to see Manufactured Home Alterations and Permit Guidelines at: <a href="http://www.hcd.ca.gov/codes/mhp/HCD">http://www.hcd.ca.gov/codes/mhp/HCD</a> Phone: (916) 255-2501 <b>Is this a Manufactured/Mobile Home (circle one) Yes / No</b>

<b>JOB VALUATION:</b> (Enter value of labor, including non-contracted, plus materials charge) \$
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Square Feet Detail	
Living Area:	Garage:
Open Area:	Covered Area:
<input type="checkbox"/> Structure Built without permits	<b>TOTAL SQ:</b>
<input type="checkbox"/> Proposed Change of Occupancy/Use - Note previous/current use below:	

APPLICANT		
Last Name	First Name	
Mailing Address		
City	State	Zip
Phone	Fax	
Email	Cell	

FOR OFFICE USE ONLY			
Zoning:	Flood Zone:		
SRA:	YES	NO	NPDES YES NO
Code Enf:	<input type="checkbox"/> YES	<input type="checkbox"/> NO	Legal Lot: <input type="checkbox"/> YES <input type="checkbox"/> NO
Occupancy	Type Construction		

APPLICANT SIGNATURE AND DATE	
	Date:
Print Name:	

APN:

\*When filed, this application and all supporting material becomes subject to the California Public Records Act. All public information related to this application is subject to public inspection and will be posted on the County's website for electronic access







## **Declaration of Installation for Smoke Alarms and Carbon Monoxide Alarms**

The newly adopted 2013 California Residential Code requires the installation of Carbon Monoxide Detectors in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. The policy for Carbon Monoxide Alarms in Butte County states: "Any permit obtained in which the value of work exceeds \$1000 associated with a Residential Group R *Dwelling Unit or Sleeping Unit* shall conform to the following 2013 California Residential Code requirements for Smoke and Carbon Monoxide Alarms (Section R314 & R315)."

### **2013 California Residential Code requirements for Carbon Monoxide Alarms:**

**R315.1 New construction:** An approved carbon monoxide alarm shall be installed in *dwelling units and in sleeping units* within which *fuel-burning appliances* are installed and in dwelling units that have attached garages.

**R315.1.2 Power supply:** For new construction required carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for over-current protection.

**Exceptions:**

1. In dwelling units where there is no commercial power supply the carbon monoxide alarm may be solely battery operated.
2. In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes **or there is no access by means of attic, basement or crawl space.**

**R315.1.3 Interconnection.** Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

**Exception:**

1. Interconnection is not required in existing dwelling units where repairs do not result in the removal of wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed.

**R315.2 Where required in existing dwellings:** Where a permit is required for alterations, repairs or additions exceeding one thousand dollars (\$1,000), existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm in accordance with Section R315.1. Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained.

**R315.2.6 Alarm requirements:** No person shall install, market, distribute, offer for sale or sell any carbon monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Sections R315.1 and R315.2 shall be installed in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every level of a dwelling unit including basements.

**R315.1.5 Multiple-purpose alarms:** Carbon monoxide alarms combined with smoke alarms shall comply with Section R315, all applicable standards, and requirements for listing and approval by the Office of the State Fire Marshal, for smoke alarms.

### **Butte County's Interpretation of 2013 CRC, Sections 314 & 315 for Smoke Alarms & Carbon Monoxide Alarms:**

Where alterations, repairs or additions exceeding \$1,000 in valuation, existing dwellings shall be retrofitted with smoke alarms and those that have attached garages or fuel-burning appliances shall have carbon monoxide alarms installed. Existing smoke alarms can be replaced with dual function alarms for Smoke *and* Carbon Monoxide and in most cases will comply with the aforementioned code requirements for Carbon Monoxide Alarms.

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### **DECLARATION OF INSTALLATION UNDER THE PENALTY OF PERJURY**

**As Owner/Contractor, I/we affirm and declare under the penalty of perjury, under the laws of the State of California, by our signatures below as Owner/Contractor, that I/we will comply prior to final inspection with Items A & B as specified herein:**

- A. Both Owner/Contractor have read and clearly understand the aforementioned 2010 California Residential Code (CRC) *Carbon Monoxide Alarm* requirements.
- B. Both Owner/Contractor are responsible for installing Carbon Monoxide Alarms prior to final inspection as per the aforementioned building code and maintaining such installation. Smoke Alarms will also be installed prior to final inspection as per the 2010 CRC.

*Smoke and Carbon Monoxide alarms are now installed in the following locations:*

\_\_\_\_\_

Owner's name (print): \_\_\_\_\_

Owner's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor's name (print): \_\_\_\_\_ CSLB License: \_\_\_\_\_

Contractor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Project Address: \_\_\_\_\_ Permit #: \_\_\_\_\_