Question
I am considering doing a reroof on my home. When will I be required to put on a cool roof?

Answer
Cool roof requirements are triggered when more than 50% (percent) of the roof area is being replaced. If one of the exceptions below applies, then cool roof requirements are not triggered: (Please circle applicable exemption)

1. Buildings with no ducts in the attic; or (access to attic space required)

2. If the building with a radiant barrier in the attic meeting the requirements of §15O.1(c)2 or (access to attic space required)

3. Buildings with at least R-38 ceiling insulation; or (access to attic space required)

4. In climate Zones 10-15, R-2 or greater roof deck insulation above vented attic; or

5. If existing ducts in the attic are insulated and sealed according to § 150.1(c)9; or (verification of insulation and Hers testing required)

6. Air space of 1.0 inch is provided between the top of the roof deck to the bottom of the roofing product; or

7. The installed roofing product has a profile ratio of rise to width of 1 to 5 for 50 percent or greater of the width of the roofing product; or

8. If the building can show compliance using performance approach.

9. A "low-E" reflective insulation type of product, or equal, acceptable to the California Energy Commission.
2. R-13 in 2x4 exterior walls, and R-19 in 2x6 or greater exterior walls, with no exterior rigid insulation required; or
3. R-19 in raised floors over crawl spaces, over open outdoor areas, unheated basements, and garages.

9.6.1.4 Replacing the Roof Surface or Roof Sheathing (partial or entire replacement)

A. Steep-Sloped Roofs (> 2:12)

In Climate Zones 10 through 15, if 50 percent or more of the existing building’s roof surface is being replaced, the minimum cool roof requirement for the replaced steep-sloped roofing area shall have an aged solar reflectance of 0.20, thermal emittance equal to 0.75, or a minimum SRI of 16. The requirements above apply unless one of the following is present (considered equivalent to the cool roof requirements in §150.2(b)1Hi):

1. Air space of 1.0" (25mm) between the roof deck and the bottom of the roofing product.
2. Roofing product profile ratio of rise to width is at least 1:5 for >50 percent width of roofing product.

High Profile Tile – Tiles having a rise to width ratio greater than 1:5 (measured in installed condition)

3. Existing ducts in attic are insulated and sealed according to §150.1(c)9.
4. Building has at least R-38 roof/ceiling insulation.
5. Roof of attic spaces has a radiant barrier according to §150.1(c)2.
6. There are no ducts in the attic space.
7. In Climate Zones 10 through 15, greater than R-2.0 insulation above the roof deck.

B. Low-Sloped Roofs (< 2:12)

In Climate Zones 13 and 15, if 50 percent or more of the existing building’s roof surface is being replaced, the minimum cool roof requirements for low-sloped roofs shall have an aged solar reflectance of 0.63, thermal emittance of 0.75, or a minimum SRI of 75 per §150.2(b)1Hi. These apply unless one of the following is present which are considered equivalent to the cool roof requirements in §150.2(b)1Hi:

1. There are no ducts in any attic space.
2. The aged solar reflectance can be traded off with additional insulation added at the roof deck as specified in Table 150.2-A of the Energy Standards.