

Cool Roofs Ordinance Development

Independent scientific experts from around the world have concluded that human generated greenhouse gases are contributing to the warming of our planet. Changes in the global climate are accelerating and have had widespread impacts on human and natural systems.

Changing climatic conditions will directly impact the lives of Los Angeles County residents. In addition to related risks such as extreme drought and wildfires, a 2015 report from UCLA predicts that by 2050, parts of Los Angeles County will experience up to triple or quadruple the annual number of extreme heat days, defined as 95 degrees Fahrenheit or warmer.

An urban heat island is an urban area that experiences much warmer temperatures than surrounding rural areas, and is caused primarily by absorption and radiation of heat by hardscapes such as asphalt and by dark surfaces such as roofs. These heat differentials are influenced by local weather patterns and can change on a daily or seasonal basis. The urban heat island effect experienced by many parts of Los

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Angeles County during an increasingly long hot season threatens public health and urban livability.

The effects of increased extreme heat days will disproportionately impact lower income communities located inland. These areas have far less tree cover than more affluent areas, and tend to be park poor, thus increasing their likelihood of being urban heat islands. Lower income residents are also more likely to live in older housing that lacks air conditioning, thereby making them more vulnerable to extreme heat events.

Furthermore, air quality in the South Coast Air Basin depends on temperature. Higher temperatures lead to increased smog formation and trigger an increase in emissions from power plants, as more energy is utilized to cool buildings. Taking action to mitigate the urban heat island effect will reduce energy consumption and costs, improve air quality, and save lives.

On October 6th, 2015, the Board of Supervisors made a commitment to climate resiliency by adopting the Los Angeles County Community Climate Action Plan 2020 (CCAP). The CCAP includes numerous recommendations to ensure that our region is climate resilient in the face of rising temperatures, including a recommendation that the County adopt a cool roof requirement.

A cool roof is defined as a roof that is constructed from or coated with highly reflective materials in order to increase the solar reflectance of the roof's surface. Cool roofs can absorb up to 65% less heat than conventional roofs made of dark surface materials such as asphalt, and their surface can be up to 50 degrees cooler than a traditional roof on a hot day. Widespread installation of cool roofs will lower both interior and ambient urban temperatures, and alleviate peak demand load on the electrical grid.

Cool roofs have become extremely cost effective for building owners, saving an average of 7-15%, and up to 20%, on cooling costs. Additionally, maintenance costs for cool roofs tend to be lower, and they have a longer life than conventional roofs. Materials have come down in price, and many utilities are offering generous rebates, rendering cool roofs competitive with conventional tar roofs. Materials are also now available in a greater variety of colors and styles.

The City of Los Angeles adopted a cool roof ordinance in 2014. Other local jurisdictions that have adopted cool roof ordinances include Pasadena and Santa Monica. Further afield, Sonoma County and Contra Costa County have cool roof ordinances in place. Over time, widespread adoption of cool roofs as part of a larger urban heat mitigation strategy will help to reduce urban temperatures in Los Angeles County.

The Regional Planning Commission recently recommended that the Board of Supervisors approve amendments to Title 22 planning and zoning code to allow for cool roofs in Los Angeles County. That recommendation is currently pending final Board approval. But merely allowing cool roofs is insufficient, given the gravity of the threat, the availability of superior, cost-effective alternatives, and the familiarity by local contractors and builders with cool roof materials, given that the City of Los Angeles has required cool roofs since 2014.

I, THEREFORE, MOVE that the Board of Supervisors direct the Department of Public Works, in coordination with the Department of Regional Planning, the Chief Sustainability Officer, and the Department of Public Health, to:

1. Undertake a public engagement process with interested stakeholders, including those from environmental groups, the building and roofing industries, labor

organizations, ratepayer advocates, and others, to solicit feedback on an ordinance amending the County of Los Angeles Building Code to require installation of cool roofs.

2. Draft an ordinance that would require utilization of cool roofing materials for new building construction, building additions, and major roof replacements in the unincorporated areas of Los Angeles County. The ordinance may provide for exceptions for certain types of roof repairs, photovoltaic roofs, or roof replacements of less than some to-be-determined portion of roof area.
3. Confer with Southern California Edison and Los Angeles Community Choice Energy to assess the feasibility of providing cool roof rebates for Los Angeles County ratepayers to assist with the transition to cool roofs if it is determined that cool roofs are more costly than standard roofing materials.
4. Undertake a public education effort to generate awareness of the availability and benefits of cool roofing materials.
5. Return to the Board within 120 days with a recommended ordinance for consideration by the Board of Supervisors.