



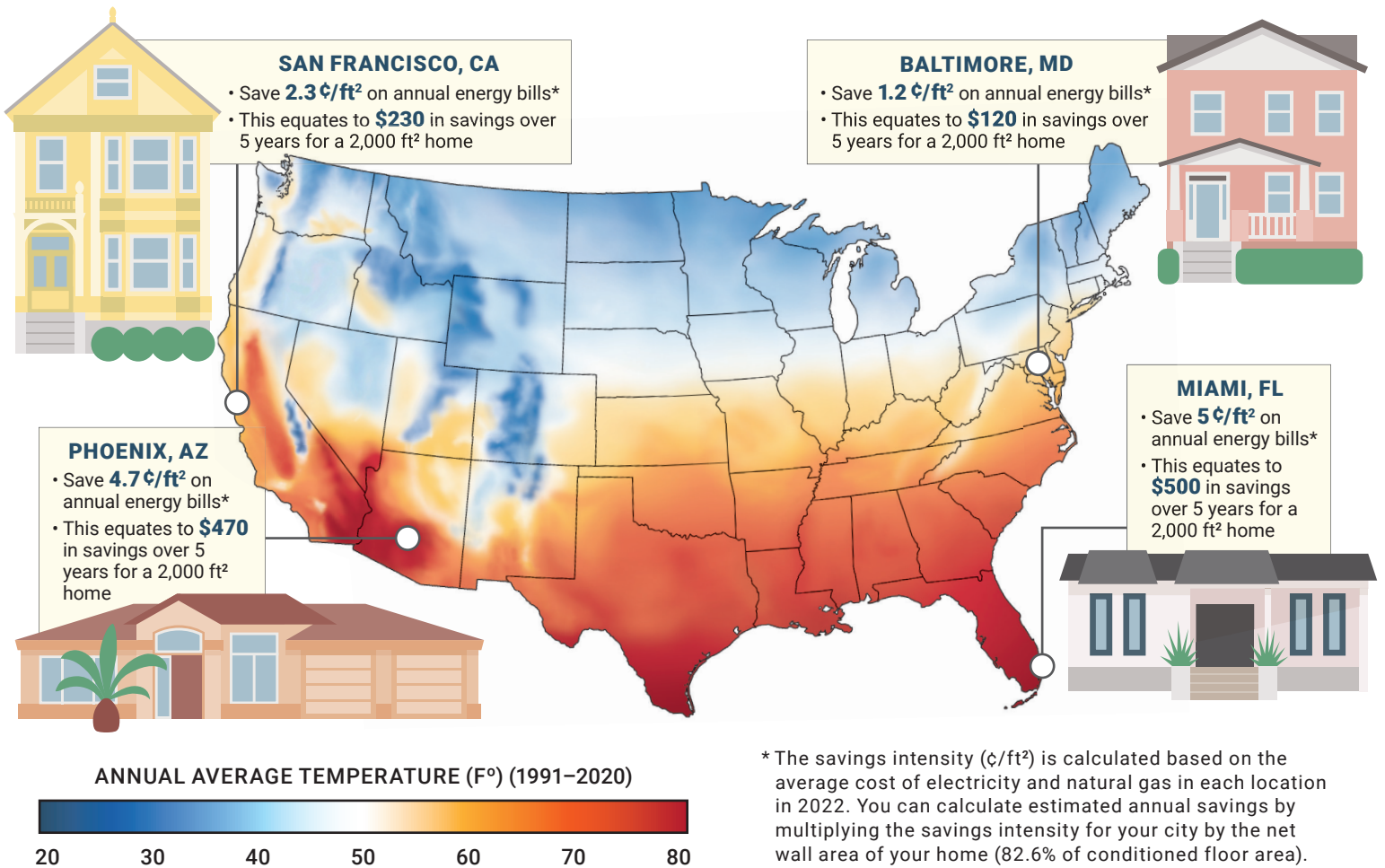
CAN REFLECTIVE PAINT OR SIDING HELP SAVE MONEY ON YOUR ELECTRICITY BILL?

AS SUMMER HEAT WAVES BECOME WORSE,

households across the U.S. are running their air conditioners more. Cool exterior walls, or walls that efficiently reflect sunlight (solar reflectance) and emit absorbed heat (thermal emittance), are one easy modification that can help lower energy bills, especially for older homes in warmer climates. Highly reflective walls can be light in

color, like the examples shown in the graphic below, or they can use specialty products that appear darker but effectively reflect infrared light.

The example savings below are for a single-family home with 2,000 ft² of conditioned floor area (equating to 1,652 ft² of net wall area) over five (5) years. Many paints and sidings have a lifespan much longer than five years, which would result in many more years of savings.



This information is based on a simulation study published by the California Energy Commission (CEC) in 2019. Savings for individual buildings depend on many factors. The examples in this document are for older single-family homes (built in 1989) with gas furnaces where the solar reflectance of all four walls is raised from 0.25 to 0.60. To find simulated data for homes with different characteristics, download this tool.

FAQ

Are cool exterior walls only white?

No! The wall colors shown in the graphic on page 1 are just a few examples of shades that can be highly solar reflective. Darker colors that use infrared-reflective pigments can also have high solar reflectance.

Are cool exterior walls expensive?

Many cool products are comparable in cost to traditional products. For example, lighter colors of conventional paints that do not contain infrared-reflective pigments are usually the same price as darker colors. Costs for specialty products that use infrared-reflective pigments will vary.

How do I find the solar reflectance of a wall product?

Visit the CRRC Rated Wall Products Directory for third-party verified solar reflectance and thermal emittance data for wall products.

My location or building type is not listed here. How can I find potential energy cost savings?

Download the Cool Surface Savings Explorer and follow the instructions in Appendix P (page P-44) of the CEC report.

Cool colors can be vibrant, too!

Here are some examples of the effect in the visible spectrum of increasing a surface's solar reflectance from 0.25 to 0.60:

25% REFLECTANCE



60% REFLECTANCE



Do cool exterior walls do anything else?

Yes! Cool exterior walls help lower indoor and outdoor temperatures, making homes and cities more heat resilient. If you don't have A/C or experience a power outage, they can help your home stay cooler and safer when it's hot out. They can also help combat the urban heat island effect. Learn more about how cool exterior walls can increase heat resilience here.

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THE ANNUAL COST SAVINGS INTENSITIES IN THIS DOCUMENT were calculated using data from the **LBNL Cool Surface Savings Explorer (Explorer)** and local electricity and natural gas price data from <https://www.eia.gov>. The data in the Explorer are the results of simulations and calculations performed as part of the CEC-funded project: **Solar-Reflective "Cool" Walls: Benefits, Technologies, and Implementation**. While this document is believed to contain correct information, neither the CRRC, nor any of its employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.