

## Advocates want roofs white to save energy

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**Anton Caputo**  
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The American dream soon could include a sparkling white roof to match that quaint picket fence.

That's the vision of "cool roof" advocates who want to persuade homeowners and businesses to replace their dark roofs with pearly, energy-saving ones.

The difference, the advocates say, could save energy costs and reverse the trend of large metropolitan areas turning into sweltering hot pockets of smog.

A group of such advocates from around the state met in San Antonio recently to discuss ways to combat the phenomenon called the "urban heat island effect."

The theory is simple: Standard dark roofs absorb the sun's heat — sometimes reaching temperatures as high as 190 degrees, according to federal Environmental Protection Agency studies.

The increased heat, coupled with a similar effect from a city's dark asphalt streets and parking lots, can heat an urban area up to 10 degrees hotter than the surrounding countryside.

The result — besides sweaty residents — is increased air pollution and higher power bills, as people rev up their air conditioners to try to combat the heat. Every added degree can increase a city's peak energy needs by as much as 2 percent, according to the EPA.

Several cities and states have instituted cool roof programs and building codes to address the problem. Put simply, cool roofing material, which is usually white, reflects the sun's rays and keeps buildings cooler.

Some community leaders and residents would like to see a similar movement gain momentum here, particularly with the area flirting with federal sanctions for violating air pollution standards.

"We're already moving in that direction," said Linda Stone, executive director of Metropolitan Partnership for Energy, pointing to recent voluntary "green building" standards and the city's new energy plan, both of which address cool roof technology.

Among those leading the charge locally are people in the roofing industry.

Contractor Roy Schaufele, who owns San Antonio's Division 7 Solutions, has been touting the benefits of cool roofs for years and has installed many around the state on large commercial and public buildings.

He describes the product used on flat roofs as a kind of "rubberized paint" that is spread on the existing roof. It costs about 30 cents a square foot, but it extends the life of a roof and saves up to 25 or 30 percent in energy, he said.

Given the potential savings, he thinks the movement will catch on.

"I think as our cost of energy goes up, and I mean the total cost — the air quality emissions, disposal of all this (roofing debris) — we're going to go full circle in the construction industry," he said. "It's a sustainability issue."

City Public Service put a cool roof on its North Side customer service center and currently offers rebates to commercial buildings that use the technology. However, it does not offer similar rebates for homes.

That soon could change. The utility is investigating whether it should include residential cool roof technology in its long-range energy efficiency plan, expected to be complete by early next year.

Laura Compton, CPS supervisor of forecasting and pricing, said one of the hurdles is sifting through the vast number of products and technologies in the growing field. But she doesn't question the potential benefit.

"My personal opinion is that it will really help cities like San Antonio," she said. "I know for a fact that it is hotter in the city of San Antonio than when you go 20 miles north. We need to do something and use a little bit of logic and put white roofs on."

White ceramic tile, which costs at least twice as much as common roofing shingles, is a common cool roof material used on homes.

A study of six identical, side-by-side Habitat for Humanity homes in Florida showed energy savings of 17 percent to 23 percent when switching from black shingles to reflective white tiles or white metal.

Bexar County energy manager Vince Fuentes said he also is investigating the issue.

"If you can reduce energy costs, expand the life of the roof and improve the quality of the roof and there is no net loss, it's a win-win," he said.

There is little data on the heat island effect on San Antonio. City arborist Debbie Reid said a 1990 study showed San Antonio temperatures to be an average of 3 degrees higher than New Braunfels.

But she said that could have changed for the worse in the past 14 years with San Antonio's growth and the corresponding loss of shade-providing trees.

As the impact becomes more obvious, Tommy Mangold Jr. of San Antonio's Turner Roofing thinks the Alamo City will get used to the idea of gleaming white roofs.

"It's something new and I don't know everything about it yet, but what I do know is it's something that will be a reality soon," he said. "I would say in the next 10 years."