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Are Metal Roofs Eco-Friendly?

No matter which side of the aisle you're on, it's tough to deny that, at some level, global warming is real. As homeowners, we make decisions every day that affect our carbon footprint. Sure some of them seem small, like the standard paper or plastic question at the grocery store. Or the question of a paper or email receipt when checking out of your favorite store. But each one of these "little" decisions adds up a more sustainable future for the next generation.



While the opportunities are admittedly less frequent, sometimes homeowners have the ability to make a much bigger impact with just one decision. Roof replacement is one of those opportunities. More and more consumers are turning to metal roofing for eco-friendly roofing options than simply defaulting to the "shingle" product family of the past.

Here are four reasons why metal roofs are eco-friendly and sustainable.

1. Recyclability

Metal roofing contains a high percentage of recycled materials, so your new roof today could have been a refrigerator or old automobile in its past life. When the service life of a metal roof ends (decades after installation), the material can be recycled yet again.

While it can be done, recycling shingles is much less common than recycling metal. Consequently, worn out shingles typically end up in landfills. Many local landfills have more shingles than they care to accept and charge exorbitant fees to discard them.



Every year, 11 million tons of shingles are removed from existing projects, and it takes 300 years for them to decompose. If you're concerned with preserving the environment for your kids, grandkids, nieces or nephews, metal roofing is the clear choice.

2. Energy Efficiency

In addition to being environmentally friendly, metal roofing can save you money on utility bills. According to the Department of Energy, 35% of energy costs for the average building are spent on heating, cooling, and ventilation. Above-Sheathing Ventilation (ASV) is a great method to reduce these energy costs. ASV means adding airspace between the metal roofing and the roofing

substrate, which could be anything from a plywood deck to existing conventional shingles. The airspace enables the energy (hot air) to move and vent into the atmosphere, rather than get absorbed into the building structure. Without ASV, all that heat under your roof finds its way to your attic space and eventually the interior of your home. Maximizing ASV reduces your utility load.

To better understand the benefits of Above-Sheathing Ventilation (ASV), check out this video comparing attic temperatures of four distinct mock-up systems exposed to the summer heat of Houston, Texas. The mock-up with ventilated airspace and solar venting has an attic temperature of only a few degrees higher than ambient air compared to the standard shingle roof, which was almost 40 degrees higher. It doesn't take most homeowners long to realize that adding above-sheathing ventilation is a wise decision that pays off quickly!.

3. Reflectivity and Thermal Emittance

By nature, [Metal roofing](#) reflects much of the sun's heat and energy away from the building resulting in lower energy bills. But in addition to the natural reflective properties of metal, advances in coating technology now enable paint manufacturers to add reflective pigments to coating systems.

[Metal roofing panels](#) with these reflective coating systems are referred to as "cool" metal roofing and studies have shown they can reduce energy cooling costs by as much as 20%. That's a big number and one that is achieved through a combination of both high reflectivity and high thermal emittance. As you might guess, the term reflectivity measures the amount of energy reflected away from the metal roof panel surface.

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Thermal emittance on the other hand is the measure of a panel's ability to release heat that it has absorbed. Reflectivity and thermal emittance with metal roofing panels work together to lower utility costs because less of the sun's

energy gets absorbed into the roof system, attic area, and living/office space below. Conversely, shingles actually absorb the sun’s energy and transfer the heat directly into the attic space and the poor homeowner ends up with higher air conditioning costs.



4. Long Service Life

While recyclability and energy-efficiency are two big reasons people are moving to metal roofing, perhaps the biggest reason is its long service life. As mentioned earlier, no other building product has a shorter life expectancy than shingles. While an architectural-style shingle can reasonably be expected to last longer than a basic 3-tab shingle style, neither is expected to last more than 20 years. Metal roofing, on the other hand, can last for 40 to 50 years.

For busy homeowners like you, the idea of buying one metal roof instead of multiple shingle roofs over your lifetime just makes sense. Most are simply tiring of the repetitive cost, hassle and mess every 15 to 20 years to replace their shingle roof. Each year, more and more homeowners are adopting the “one and done” mentality that metal roofing offers.

Besides that, how often do you get to make your own life easier and make the world a better place at the same time?

About McElroy Metal

Since 1963, McElroy Metal has served the construction industry with quality products and excellent customer service. The family-owned components manufacturer is headquartered in Bossier City, La., and has 13 manufacturing facilities across the United States. Quality, service and performance have been the cornerstone of McElroy Metal’s business philosophy and have contributed to the success of the company through the years. As a preferred service provider, these values will continue to be at the forefront of McElroy Metal’s model along with a strong focus on the customer.