



FREE SUSTAINABILITY

BY MATTHEW COATES, AIA, LEED AP, COATES DESIGN ARCHITECTS

How much more does it cost to build a sustainable home? This is a question that we get all the time. The answer is of course, "it depends". But every time, what I really want to answer is "ZERO", because it all hinges on WHEN and HOW you do the math.

The decisions you and your team make as you go through the design & construction process ultimately determine how much your project will cost. There are all sorts of choices we can make to ensure a more sustainable home, that are absolutely FREE. At the very beginning, the site we choose and how we position the buildings can mean a great deal in terms of passive solar strategies and thus, interior comfort and energy savings. It costs nothing extra to orient a building relative to the sun's path or to capture breezes and naturally ventilate your home. We can also choose to build less by making use of spaces that are designed to serve multiple functions. For example, your master closet could also be a laundry zone or your spare bedroom could function mainly as a study.

Another choice we can make that costs nothing, is choosing to renovate or recycle an existing structure. Doing so obviously minimizes the ecological impacts of construction on an undeveloped site; but we've also found it can actually save costs by re-purposing salvaged materials and diverting resources from the landfill.

One thing that is also helping reduce green building costs is that green building is becoming the norm...and therefore becoming far more cost effective. More and more product manufacturers recognize that the green building movement is here to stay and most are beginning to re-engineer and tout their products as being environmentally friendly. All of this trending to be "green" has opened up the possibilities for Architects and designers to include eco-friendly products that don't necessarily cost a premium.

In the end, some decisions you make (in the interest of sustainability) for the home may cost more. For instance, you may choose to spend more for a geothermal heating system, which will save energy by borrowing heat from the earth to warm your house. This higher upfront cost will be offset over time by lowering your operating costs during the life of the home. Another example is observed in the choices for exterior cladding materials. Many times the more durable finishes such as ironwood or prefinished metal are more expensive up front but often require far less maintenance (life-cycle costs) than their less expensive counterparts. This is one reason why it is so important to evaluate the long term impacts of initial cost decisions. We often think of the initial construction cost of a home as being the largest related cost. Actually, the initial construction costs typically represent just 20% of the entire costs associated with a single family home over its lifetime. The remainder of expenses represent the costs to operate and maintain it.

As with any design and construction project, there's a lot to consider when it comes to budget, schedule and the list of "must haves"—and it can be overwhelming! However, by having a team that is well-versed in the process of sustainable decision-making, your green home can also be *economically* sustainable over the long-term.



**COATES
DESIGN**
ARCHITECTURE_SUSTAINABILITY