

Opinion

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Another Voice: Energy-efficient buildings reduce ownership costs

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By Marty J. Walters

Can a global reduction of fossil fuel use reverse human progress and “deny billions of people a better life,” as a recent Another Voice column suggests?

No doubt, fossil fuels have contributed to great advancements in the last couple of hundred years.

However, conserving fossil fuels by using less energy to accomplish the same tasks is always desirable. The mission of fossil fuel conservation drives the evolution of “green” building innovation that we see today.

The American Physicists Association targets building energy conservation as a high priority, since U.S. buildings account for nearly 75 percent of electricity use and 40 percent of all U.S. primary energy usage.

Today, various affordable technologies can produce Zero Energy Ready (ZER) buildings, both commercial and residential. ZER structures incorporate passive design and other efficient elements. ZER owners get better buildings with a lower cost of ownership.

Each new energy-efficient building creates an energy conservation stream that can last for 75 to 100 years or longer. One example would be to implement just one currently available energy conservation measure that would save 25 cubic feet of natural gas per square foot per year in the 600 million square feet of commercial building space erected annually (2014 Dodge report).

In this scenario, each year, 13 billion cubic feet of natural gas savings (energy equivalent of 2.2 million barrels of oil) will come on line.

What prevents building smarter when solutions are affordable and widely available?

First, according to a survey I conducted among hundreds of designers, the overwhelming majority of building designers are not familiar with the advanced energy design guides. The guides offer proven, cost-effective strategies for energy-efficient building design. The guides are free to download, and are co-produced by the U.S. Department of Energy, U.S. Green Building Council, American Institute of Architects and others.

Second, many developers are unaware of the independently produced reports that make the business case for green building.

Third, building owners take a short view. They pay less money up front for buildings that carry a higher monthly cost of ownership, which they may pass along to tenants.

Fossil fuel conservation not only reduces our carbon footprint, but can lead to a massive redistribution of wealth and job creation. Conservation converts energy expenses into discretionary spending, putting more money in people’s pockets to spend for more goods and services.

Marty J. Walters is director of sales for NRG Insulated Block, an energy conservation company.

