

Must Read: 'From Homes to Cars, It's Now Time to Electrify Everything'

Every now and then I read an article that I am compelled to share, because it simply "nails it."

Such was the article by Saul Griffith, published Oct. 19, 2021, on the Yale School of the Environment website, www.e360.yale.edu, and reposted Nov 30, 2021, on GreenBuildingAdvisor.com.

The thesis of that article is summarized as follows: "The key to shifting away from fossil fuels is for consumers to begin replacing their home appliances, heating systems, and cars with electric versions powered by clean electricity. The challenges are daunting, but the politics will change when the economic benefits are widely felt."

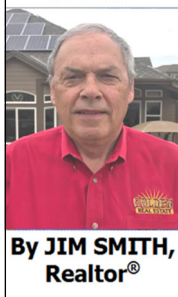
The diagram above right shows what can be electrified in a home. Rita and I are most of the way there. This fall I purchased an electric snow blower to complement our electric lawn mower, weed eater, leaf blower and automobiles. Earlier this year I purchased a heat pump water heater to complement our heat pump hybrid furnace. (Hybrid, because it still burns natural gas when the outdoor temperature dips below 30° F.)

All these electric devices are powered by the sun, thanks to our 10-kW solar PV system installed when we bought our home in 2012. Because we still cook with gas and occasionally burn gas in our furnace and fireplace, our Xcel bill is still around \$35-40 per month, but we're doing our part to "electrify everything."

You can do that, too.

The central thesis of Saul Griffith's article is that we have little control over the **supply** side of ener-

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By JIM SMITH, Realtor®

gy, although there are encouraging signs of it becoming less dependent on fossil fuels. But we have total control over the **demand** side of energy:

"We don't have a lot of choice on the supply side, but we have all of the choice on the demand side. For the most part, we decide what we drive, how we heat our water, what heats our homes, what cooks our food, what dries our laundry, and even what cuts our

grass. This constitutes our 'personal infrastructure,' and it is swapping out that infrastructure that will be a key driver of the global transition from fossil fuels to green energy."

I have a link to Griffith's full article at www.GoldenREblog.com.

According to Griffith, who co-founded the non-profit Rewiring America, there are 280 million cars and trucks in America, 70 million fossil-fueled furnaces, 60 million fossil-fueled water heaters, 20 million gas dryers, and 50 million gas stoves, ovens and cooktops. Until now, the conversation has been about making each of those fossil-fueled appliances more efficient, earning "Energy Star" ratings.

But the real goal should be to replace them with electric appliances burning the increasingly green electricity which is being generated by our electric utilities.

A common refrain from people regarding electric cars is that they are not really zero emissions because of how the electricity is generated. I myself was originally reluctant to buy an EV because I didn't want to "switch from burning gas to burning coal."

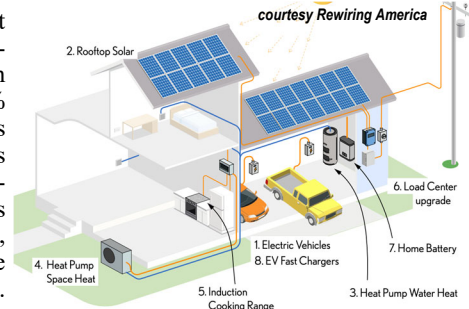
However, that argument overlooks the relative efficiency of electric motors. In a fossil-fueled car, only 20% of the energy in the fuel is propelling the car. The rest is waste energy, primarily creating heat which then requires more fuel to cool it. In an EV, 90% of the energy from the battery propels the car. There's almost no waste energy in a battery EV's drive train.

An suitable analogy to the gas-powered car is an incandescent light bulb, in which light is a **byproduct** of heating the filament. It's no surprise that the LED light bulb uses about 20% of the electricity of an incandescent light bulb for the same amount of light, because light is the **primary** product of the LED, not a by-product of waste energy.

Because of its relative efficiency, even if an EV is charged from electricity created entirely by coal, its carbon footprint is far below that of a fossil-fueled vehicle. The same applies to today's highly efficient heat pumps for both space heating (and cooling) and for water heating.

Griffith's point is that more efficient fossil-fueled appliances won't get us where we need to be to save the planet from catastrophic climate change. We need to get to zero emissions, which is only possible by going all-electric in our homes and vehicles as our electric utilities make their inevitable transition — whether incentivized by government or simply by the economies of renewable energy — to clean energy.

You, like me, will love the effects of this transition to all-electric living. Imagine a future where carbon dioxide is not a household poison; where motorcycles don't disturb the peace and quiet of our streets and canyons; where semis slow down quietly because they are putting energy back into their batteries instead of using loud and polluting engine braking; where our neighbors aren't disturbed by loud



lawn mowers, snow blowers and leaf blowers; and where children no longer suffer health problems from their own school buses or playgrounds next to highways.

You, like me, will appreciate the ease of use and near-zero maintenance of electric devices. My snow blower, lawn mower, and leaf blower start by pushing a button or pulling a lever and never need a tune-up, refueling or oil change.

Griffith is not arguing that everyone should immediately swap out their fossil-fueled cars or appliances but rather avoid replacing them with newer ones. Cars, for example, can last for 20 years, and gas furnaces for 15 years. When they need replacing, make the smart choice and replace them with their electric counterparts. You'll be glad you did five or ten years later when their resale value has evaporated due to public recognition that they became obsolete before you purchased them.

Toy Drive This Saturday 10-4

The Rotary Club of Golden collects new, unwrapped toys every Christmas that are then sold at garage sale prices to low-income parents so their children can enjoy a wonderful Christmas. The idea is to let parents buy toys at prices they can afford, thereby preserving their dignity as parents. A great idea, which we support.

Bring only new, unwrapped toys to Parfet Park in downtown Golden this Saturday, Dec. 11, between 10 a.m. and 4 p.m. More information at www.TheMiracleShop.org. Thanks!

Recommended Video: Are We in a Housing Bubble?

This is a question that seems to be on everyone's mind, especially after a year which has seen double digit appreciation in home prices.

Finally, I found a focused discussion on this topic by highly knowledgeable persons that I can recommend. I have put a link for it on our blog, GoldenREblog.com. The panelists are Nick Bailey, president of Re/Max, LLC, Lawrence Yun, chief economist for the National Association of Realtors, and Ward Morrison, president of a

mortgage franchising firm. The consensus of these experts is that 2022 will see most appreciation (3 to 5%, says Yun) but no crash. The main reason is the imbalance of supply and demand and mortgage rates projected to be no higher than 4%, which is still quite low.

The record job growth is also a critical factor. Foreclosures will remain low because only 2% of homeowners have negative equity. Watch the 28-minute video on our blog. You'll learn a lot, as I did.



See All Our Listings, Active & Under Contract, at www.GREListings.com

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