

# **BOB DOPPELT: You can save a lot of energy by stopping wasteful behavior**

By Bob Doppelt

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I've always admired auto mechanics. I bust my knuckles working with wrenches in tight places and think it best to leave engine repair to the pros.

But recently I've had to become a mechanic. Made from waste vegetable oil, the biodiesel that powers my diesel pickup damaged the engine months ago. Two repair shops haven't been able to fix the problem.

So I'm stuck with the job.

This is not the first time it's been hard to find someone more skilled than me to repair one of the renewable energy technologies my wife and I use in our quest to reduce our impact on the climate.

A few years back, we installed a battery-based solar electric system at our home. The batteries keep water pumping when the electrical grid goes down, but they almost burned up last year.

No local solar company could tell us what caused the problem or how to fix it. Our system was down for months before we finally found a guy in Bend who solved the problem.

Although I can't prove it, I'm fairly sure that the batteries crashed because I allowed a contractor who was giving us a bid to expand our system to monkey with its control panel. He didn't know the system well enough to properly reset it when he finished.

And after he'd done the repairs, the Bend solar expert told us the solar panels were not installed properly, although he said this was not the cause of our battery problem.

Here's the point. In the long-run, renewable energy technologies will be essential in expanding the carbon-free economy needed to solve the climate crisis. Many of those technologies, however, are still in their infancy and have design flaws.

Our school-of-hard-knocks experience also suggests that some people selling new technologies don't understand them very well, don't install them properly or don't know how to fix anything but simple glitches. When complex problems pop up, they often shrug and tell you to call someone else. (Like who?)

In addition, consumers often don't know how to properly use or maintain new technologies. The result is damaged equipment and disillusioned users.

That's why I'm convinced that if we are to reduce emissions rapidly enough to prevent uncontrollable climate change, we cannot rely on new technologies. Instead, we must focus on cutting energy consumption — and thus emissions — through simple, cost-effective behavioral changes linked with the use of existing proven technologies.

Research shows that if we prioritize reducing energy use through behavioral changes and the use of existing technologies, carbon emissions in the United States can be cut by 10 percent to 30 percent within just a few years.

That would buy time for new renewable energy technologies, and their industries, to mature. It also would save households, businesses and government in Lane County and elsewhere millions of dollars.

My wife and I have found many simple ways to cut energy use and save money. After we purchased our current home, for example, we significantly increased its insulation and installed super-efficient windows.

We traded in our old washer, dryer and refrigerator for high efficiency models.

We installed a rooftop thermal hot water heater that allows our electric water heater to be shut off for five months each year and preheats the water during the other months.

These existing technologies are reliable.

We also scanned the house and found numerous electronic gadgets — such as clocks and lights — that could be discarded, and others — such as the toaster and computer — that we now unplug when not in use.

We trained ourselves to turn off lights and other electrical equipment when we leave a room for more than five minutes. And we decided we would replace essential devices but not purchase additional energy-consuming gizmos.

Sometimes I get lazy, and we've made our share of mistakes. But we've also cut our energy bill by more than 50 percent and saved money with virtually no change in our lifestyle. We have simply eliminated waste.

Not counting the solar electric panels we installed due to a personal commitment, payback time for these changes should be about four years.

Commercial businesses and public agencies can achieve even more cost savings while cutting carbon emissions if they search for and eliminate wasteful energy use.

Some renewables work great today, and most contractors know their field extremely well. Even with improper installation and despite the battery incident, our solar PV system has performed very well.

But we can't count on new technologies to solve the climate crisis. We have the capacity right now to substantially cut carbon emissions by slashing energy use using simple, cost-effective behavioral changes coupled with the use of proven technologies.

Failure to pursue these actions is literally the same as flushing dollar bills down the toilet. It also puts our economy, community and children at risk of runaway climate change.

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