

HandyBob's Blog

Making off grid RV electrical systems work

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Grid Tied Solar Power – My Opinion

DOES IT MAKE SENSE?

By HandyBob, August 2009

Now that I have developed a certain reputation regarding my ability to make solar power work on RV's, people keep asking me about installing solar panels on their homes and selling power back to the electric utility. Just last year a good friend of my wife told me that she didn't want me talking to her husband & convincing him to put solar power on their house. What I said to her then & what I am going to tell you now will come as a shock.

“Grid tie solar systems added to homes that are already connected to the grid are only good for bragging rights for rich people.”

We have all heard stories of people with grid tie solar systems who say that they get a check every month from the power company. What they don't tell you is that they usually have \$40,000 or more invested in their system and they get a check for just a few dollars each month. I have heard all kinds of estimates about the cost of solar generated electricity, but whatever that number is, it is very high per watt. It takes a lot of solar panels to power the typical very inefficiently designed existing home. The pay-off time for these systems at today's prices for solar power is typically over 20 years. Plus, nobody talks about the maintenance costs associated with these systems, and those also need to be considered, since nothing lasts forever. The next thing these people tell you is that they got a government grant or tax write off to help pay for their system, but even after that, they are still facing a long pay back. Worse, that money came from you and me. I don't believe we should be spending our tax dollars putting solar power systems on rich people's houses. There are many better places for our tax dollars to be spent. Here we are with our government bailing out huge corporations and talking about adding an enormous tax burden for health care, while we throw money away on things like solar electricity that doesn't make economic sense.

Another thing; solar power may never make sense in some climates. I see articles in magazines about solar power systems added to homes in the Pacific Northwest and it just makes me see red. I saw one where the south facing roof was not big enough and they had to put half the panels on a west facing roof. The installer claimed that they didn't lose much power by doing that and I know for a fact that is not true. There is a fire station here in Montana with all of its solar panels on a west facing roof, where the panels put out no power until nearly noon! No, the power gained later in the day does not make up for the morning loss and missing out on the true noon potential by not being aimed toward the sun. The dealers selling those systems are making a lot of money installing systems that do not make monetary sense. The mere fact that the magazines will publish these articles should tell you what their agenda is. I have yet to find a publication that reports the truth concerning the viability of solar power at today's prices. Think about this folks; these people are all in bed together (the manufacturers, dealers, installers and magazine publishers) and they are trying to take your money away!

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What does make sense right now is to take every dollar you can scrape together and buy all new efficient Energy Star appliances, make sure your home's insulation, windows and doors are as good as they can be, replace your heating and/or air conditioning system, possibly do some lighting changes and put a hot water solar system on your home. These things all have been proven to have a relatively short pay back period, and they don't cost anywhere near as much as a solar power system. You should not be heating with electricity today simply because the cost to our environment is too high. We generate electricity by burning coal and getting that power to our homes on the electric grid is very inefficient. Burning that coal at your home instead of the electric plant is much more efficient, but nobody wants to do that any more. Depending on your location and the design of your home it may also make sense to consider solar heating with add-on air heating panels or passive heat via south facing windows. Just teaching yourself to turn off the lights and appliances that you are not using can have a substantial effect on your energy bill. However, do not believe the bull concerning how much power your TV consumes just by being plugged in. It does use a small amount, but nowhere near those crazy claims that you have seen on TV. My own 19" wide screen TV, which is solar powered, is always plugged in and the inverter powering it is always on. I am talking about something like one watt for the TV & five watts for the inverter and if you were to believe the wackos, it should be around 15 watts just for the TV. I just read something that said we spend billions of dollars powering appliances that are turned off. Where is the documentation? Prove it to me. The news people never ask the next question. However, it does drive me crazy every time we visit friends or relatives to see how most people live, now that we have lived efficiently for years. Solar water heating systems are not popular today even in Arizona, and they should be legally required in many climates. The technology is here now. It is just not being utilized.

Off grid solar power is an entirely different issue. I am planning a small, very efficient, off grid home and I expect to be able to run it on about \$8000 worth of solar electric equipment, batteries and inverters, not including labor. (I don't charge myself anything.) A power line to this house would cost just about the same \$8000, so the pay back period is zero hours, not years. That's right, my solar system will be paid for the second I turn it on because I am spending the money that a power line would have cost to build my own personal electric generating plant. I will have maintenance costs for things such as batteries & the inevitable inverter failure, but that will cost a lot less than sending a check to the utility every month for the rest of my life. A giant plus for me is that my own power system will be a lot more reliable than power supplied by the grid. We have not experienced a power failure in our RV due to malfunction for over eight years. We laugh when we see reports about power failures on the news due to storms.

If and when there is a breakthrough in the manufacturing of solar panels that cuts the cost to a third of what it is today, then I will be talking a different story. I know there are many new technology solar panels being talked about, but until one makes it to the market and is proven to work, I don't even want to discuss it. *(Added 2010: Yes panels prices are dropping, but remember than you must spend more on the grid tie inverter in order to hook up to the grid than I am spending for all of the solar panels for my off grid house. There are used panels for sale every day from houses where the grid tie inverter failed and when the owners found out what the replacement would cost, just gave up.)* This is just like all of the talk in the past about 100 mpg carburetors and we all know that never amounted to anything. By the way, GM's claims of over 200mpg for the new Volt do not include the cost of recharging the batteries and electricity is more costly than gasoline (\$ per BTU) and unless your power comes from a source other than a fossil fuel powered generating plant, it causes more pollution. Talk about deceptive advertising! The stupid news people never ask how our nearly overloaded electrical grid is supposed to power all these new cars, how inefficient using electricity to replace gasoline is or how much pollution is released while generating that electricity. This idea that we could all be driving non-polluting electric cars without asking about how to get the electricity is absolute stupidity. Just because something sounds good or green does not make it so.

Every time somebody parrots that popular mantra "we have to start somewhere", I start yelling.

Start somewhere that makes sense!

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2015-04-29