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Surviving Record Snowfall Without PG&E – Thanks To Solar Energy!

Like most everyone else in Nevada County I've been sharing storm stories with everyone. We were trying to recall the last time we had over three feet of snow where I live (about 3400 ft elevation) and everyone seemed to agree it's been around 15 to 20 years. While we weren't without power for nine days this time, like we were during the last storm this year, it seems everyone lost PG&E for at least a few days. Since my story is a bit different than most, I thought I'd share it with you in this weeks issue of Going Green.

Just about everything about our home is solar in some way, shape or form. For example half of our total window area faces south. The other half is almost all east and west facing window. The south windows get sun all day long in the winter but are shaded by trees in the summer. The east and west facing windows are shaded all year long by trees, except for a little bit of sun that sneaks in under branches in the winter. Those south-facing windows really came in handy after all that snow fell.

By late Friday afternoon following the big snowfall of 2011 the sun managed to peek out from the clouds a little and our home instantly started to warm up. By Saturday and Sunday the clouds were mostly gone and our living space approached 78F. That's quite a bit warmer than the 68F we maintain with our hydronic radiant floors, so it shows what a difference the sun can make!

The sun also covers 100 percent of our electricity bill via our battery backup solar power system. When the storm hit Thursday night it wasn't long before PG&E went down. The only way we know when PG&E goes down is if we happen to notice a clock that's on a circuit tied directly into PG&E. Most of the circuits in our home are tied into our solar system, so they keep operating. As it turns out, we were able to power everything with our solar system between Thursday night and Saturday morning! But by Saturday morning the power still wasn't back on.

So when I got up Saturday morning I made sure to check on how much energy we still had left in our batteries, thinking I might need to fire up the generator. Sure, I thought about checking them Friday night but it was dark and really cold outside so I chickened out. By morning the batteries were a little run down, but not too far, so I decided not to run the generator. Besides, it was looking like it would be a nice sunny day so I just let the sun "do its thing" and by Saturday night the batteries were all charged up again. Same story for Sunday. So I called friends and said "Hey, rather than huddle around candles at your place, why not come over to my place and watch some movies, drink hot cocoa, and take a nice hot solar shower (we have solar water heating too)?"

Normally, if it's been sunny during the day, our heating system won't even need to turn on but it was so cold at night during the recent storm it did turn on for a short time. Fortunately we only need a small pump to circulate hot water through our floors so it didn't put much of a dent in our battery storage. If we'd been trying to heat the house with a forced air furnace instead we wouldn't have been able to coast

for so long on solar alone.

Of course it wasn't all roses. I had to shovel some seriously deep snow, which was pretty hard on my back. My front wheel drive electric car got so hopelessly buried in snow it was still covered a week after the storm! The only thing “solar” that didn't pull us through the storm was our solar clothes dryer (aka the clothes line). I guess I'll have to work on that!

Ray Darby is President of Sustainable Energy Group Inc., a Grass Valley company offering energy efficiency and solar services for residential and commercial buildings, from comparing the alternatives through installation and servicing of energy systems of all types. You can reach him at 530-273-4422, via email RayDarby@SustainableEnergyGroup.com, or visit their web site at www.SustainableEnergyGroup.com.