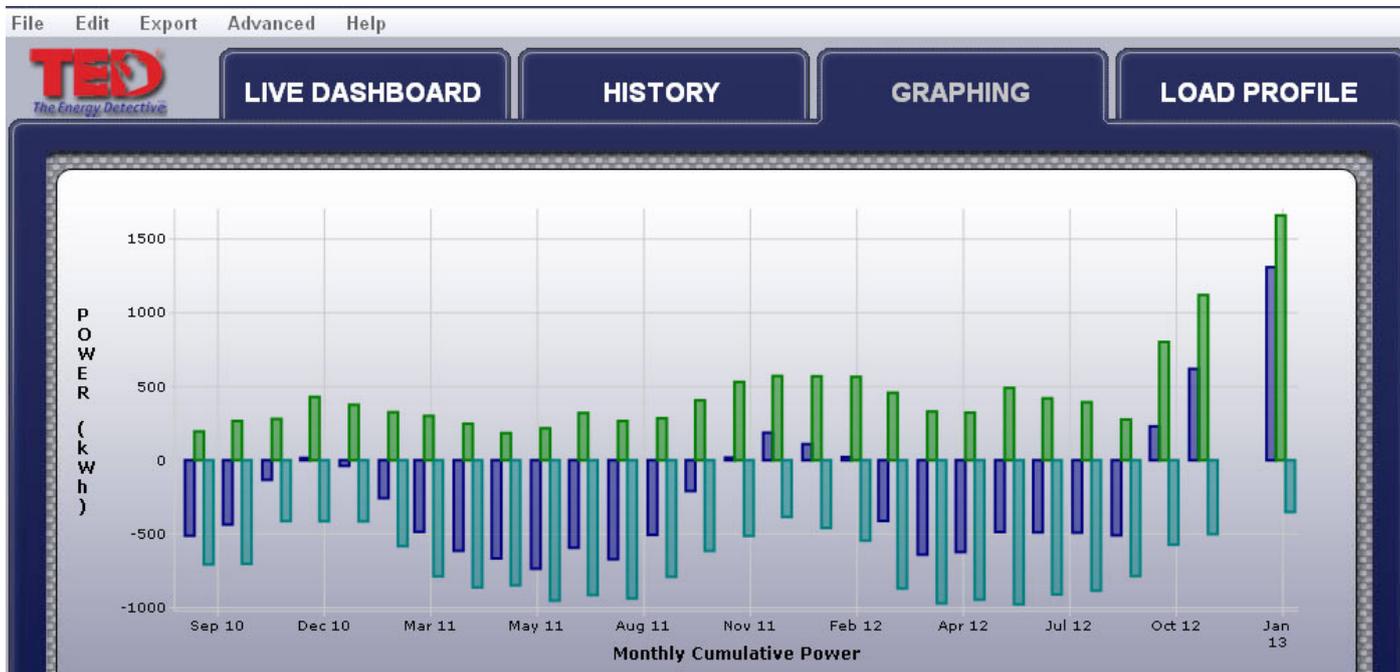


Should we feel guilty about heating with solar?

Written by Christof Demont-Heinrich, SCD.Com Editor
Thursday, 03 January 2013 12:43



editor's
blog
entry

We burned though 1,600 kWh of electricity and generated just 300 kWh of solar electricity in December. This represented the second straight month in which: a) we used more than 1,000 kWh of electricity; b) our electricity use far exceeded our solar-electricity generation.

Yes, all of this extra use is planned: Since [we don't have an EV yet](#), we're trying to do as much of our winter heating as possible [with six wall-mounted eheat.com electric heaters](#) while using our central, natural gas burning, forced hot air furnace as little as possible.

We're taking the extra electricity we're burning out of a ["bank" of more than 10,000 extra solar-generated kWh](#) we've produced in 2 ½ years with our [5.59 kW solar system](#).

\$40 utility bill for December

As a result, we're going to have a very low utility bill for December, probably something like

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\$40, maybe even less. Not bad for a household with four family members and about 2,000 square feet.

Most of these costs are likely to be a result of burning natural gas for our hot water with less of that total coming from us using a little bit of gas to power our central forced hot-air system (we still need the gas furnace to create base heat).

A \$40 utility bill for December, a ton of solar-offset [home energy use independence](#) – it all sounds pretty good.

So, why am I feeling guilty?

For starters, our eheat.com heaters must be on essentially all of the time in order to produce adequate heat. This means I've made the decision, on some occasions, to let four, five, sometimes all six of them, continue to burn electricity to heat our home even when we're away for six or more hours at a time.

With our natural gas forced hot air furnace, I'd never have done this. I'd turn the thermostat down to 52 degrees and our gas furnace would not have come on while we were away.



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Base heat problem

Because eheat.com's 450-watt heaters aren't very powerful, they can't produce a good base heat (okay, after having four of them on for four hours in our living room, you might get from 54 to 62 degrees – but even I don't want to wait four hours for decent heat on cold winter mornings).

In fact, we don't have enough of these eheat.com wall heaters to keep our first floor reasonably warm at night. We bring three or four of our six heaters upstairs to heat our bedrooms at night (two of our six wall heaters are not portable).

This means the first floor can drop to as low as 53 degrees by morning, at least on nights where we see single digit temperatures outside. And the only way to get a decent base heat level on our first floor during day time is to – you guessed it – crank the natural gas forced hot air furnace in the morning (usually for about one hour).

Still using natural gas

So, we're *still* using natural gas, albeit a lot less than last year, to heat our home. This even as we up our monthly electricity use to levels that seem absurdly high to me (1,600 kWh vs. the 250-400 kWh usage we were seeing before).

I feel especially guilty about leaving the eheat units on for long periods when no one's home -- but should I?

I generally like eheat.com's wall heaters (although I don't like the finicky sensors installed on the newest model to ensure the heaters are hung on eheat's proprietary wall hangers; sometimes these heaters turn themselves off even when hung on eheat.com's proprietary hangers).

Ultimately, eheat's wall units are best suited for two things: 1) Serving as primary heaters in *moderate*

winter climates where outdoor temperatures rarely if ever drop below 30 degrees; 2) as supplemental heaters for cold spots in a house.

It's true the electricity to power our six eheat.com heaters isn't costing us any money, and won't ever cost us money. We'll never burn all of those 10,000 extra solar kWh.

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So far, this winter we've made about 2,000 kWh worth of inroads into the banked 10,000 kWh, and I estimate we'll probably push another 2,000 kWh or so more into our banked solar kWh. This will still leave us with 6,000 extra solar kWh at the end of the winter -- and spring and summer 2013 are likely to push us back to about 9,000 banked kWh.

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Keeping the cats warm

So, my big guilt instigators are: a) high monthly and daily kWh use (we've used up to 75 kWh in single day!); b) the fact that I'm forced to leave our eheat.com heaters on for long periods of time when no one is home (okay, our two cats are home ;-).

Under our previous home heating model, our natural gas furnace didn't run at all during daytime hours on weekdays (as I set the thermostat to 52 degrees when we're not in the house). It didn't run much at night either, as I typically set the thermostat to 58 degrees. But we did burn hundreds more therms worth of natural gas than we'll end up doing this winter.

I feel especially guilty about leaving the eheat units on for long periods when no one's home -- but should I?

What do others out there think? What would you do in our circumstance: Dial back on the electric eheat.com heaters and eat up fewer of our 10,000 banked solar kWh, but burn more natural gas via our forced hot-air furnace, or continue with the current approach which is to rely

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as much as possible on pure electric heat, even if it means running heaters for long periods of time when we aren't home?

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