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Subject: : Conservation

Topic: : Windpower

Re: Windpower

Author: : franklin

Date: : 2009/5/14 19:48:43

URL:

Quote:

tomgamber wrote:

so you are using solar power yourself...that's good.

It would appear others are too.

[http://www.pittsburghlive.com/x/valleyindependent/s\\_624073.html](http://www.pittsburghlive.com/x/valleyindependent/s_624073.html)

Unless you LIKE buying fuel from terrorists and polluting your own trout streams...

In Idaho I paid \$7.50 for an electric bill in the summer and 40 bucks in mid winter with electric heat. Less than 25% fossil fuel. If you use less expensive means you can charge less. If you can generate it yourself, you don't have to pay for it at all.

**My point was you told Chaz he could run a a toaster for 2 hours.** First, just how dark do you like your toast? (2hrs?) and second **it was a lie** because as I said you can reduce dependancy by 85%. Hopefully 85% of your electric bill isn't for making pop tarts...

A 6.5 kw system costs 51K...New Jersey, for example has the kind of generous tax incentives that would allow you to recoup costs in about 5 years.

That's 6.5 kW peak power if built at the equator, aimed directly at the sun, in 0 percent humidity, at high noon on the day of solar equinox. In Pa the average solar energy per sq meter is about 2kwh per day in December. It's about 4000 in the summer. But that is what is shining on the panel. There are a number of multipliers you need to apply all fractions less than 1. Such as 0.075% initial conversion efficiency, 0.9 aging, 0.8 for AC conversion, x% for deviation off true south, dirt on the panel over time, etc. You will get about 100 wh per sq meter of solar cell in December once your all done.

This cost us \$400 per sq meter buying in many thousands of panels. I estimated the average roof to hold 30 panels on a perfect south facing roof mounted at latitude. So for \$12000 you can get 3 kwh of power, enough to run a toaster oven for two hours, in December. I didn't even include the cost of installation and the DC/AC

~~converter. My electric utility charges me about \$0.15 per kwh. So this is a \$0.45 per day.~~

A 6.5 kw system might make sense in Arizona or elsewhere in the SW. If it was really worth the cost I would have bought panels and put them on my house.