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POWERED BY THE SUN

"If I Installed Solar, How Much Electricity Would It Generate and How Much Would I Save?"

By Chris Lee

For those of us living here in Houston, we're all acutely aware that the sun is a plentiful, if not unrelenting, source of heat and sunlight (okay, the heat is really a byproduct of the intense sunlight). And for many of us I bet that we've thought, "Gosh, if I could harness just some of that free sunlight...." The harder part is trying to answer the obvious questions about installing a solar array or solar panel system on the roof of your home - "How much electricity would it generate and how much money could I save on my electric bills?"

Without having to know much about solar or needing to contact a solar installer or solar company, you can easily get those estimates at your fingertips. The National Renewable Energy Laboratory (NREL), which is operated by the US Department of Energy, has created a website allowing anyone to calculate the amount of electricity a PV (photovoltaic) system (aka: solar panel array system) would generate. Here's the website (notice that it already takes into account that you're in Houston): http://rredc.nrel.gov/solar/calculators/PVWATTS/version1/US/Texas/Houston.html

Here's a shortened link: http://goo.gl/bRurv

Once on the website, for your initial estimate, you can use the default information presented and just click on "calculate" at the bottom. On the results page you will see that in Austin, a South facing solar panel array (which means the Array Azimuth = 180 degrees) that's built for 4 kW of electricity generation, would generate 4879 kWh in a year and save you \$473.26. To give you a better estimate, there are 3 settings you can go back and change:

- 1. Array Azimuth in degrees.
- 2. DC Rating in kW.
- 3. Cost of Electricity in cents.

ARRAY AZIMUTH: If you're considering placing your solar array on the side of your roof that gets the most sunlight and that part of the roof faces due South, then the Array Azimuth would be 180 degrees. If your proposed solar array will be facing Southwest, the azimuth would be 225 degrees. Southeast would be 135 degrees. And so forth. The more accurate your submission, the more accurate your estimate.

DC RATING: The DC Rating (in kW) default is 4 kW in the calculator. This would be the "size" of electricity generation by your solar array - basically, by adding (or subtracting) more solar panels to your proposed system, the DC Rating would increase (or decrease). Makes sense - if you add more solar panels to your array, you'll increase the amount of electricity generated and therefore increase the amount of money saved.

COST OF ELECTRICITY: The default is the Texas state average of 9.7 cents per kWh. For those of you with an electricity provider with higher (or soon to be higher) rates, you should change the rate accordingly to get a more realistic estimate.

So that's it, an easy way to determine what you would be generating with a solar array on the roof of your home. This is a simple but fairly accurate way to determine the benefit of installing solar on your home. Of course, YMMV (your mileage may vary) but by getting a fairly accurate estimate of the amount of electricity generated and the money saved, you can better determine whether or not installing a solar array on your roof would make financial sense for you and your family. If you have any questions, please ping me at leec89@gmail.com.



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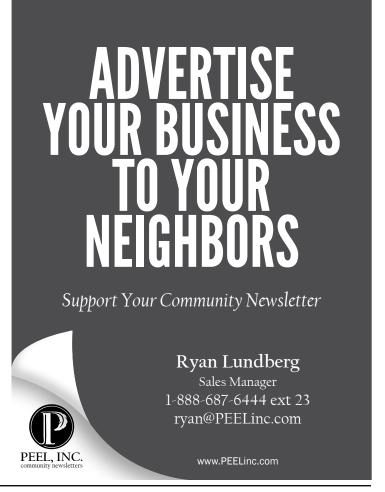
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