Using the example above of a 250-watt STC rated panel, if you multiply the 250 watts the panel produces by the number of hours of full sun you get in a day, you’ll get the amount of kwh that panel produces per day. Multiply by 30 days and you’ll get mothly kWh output for the panel.

The average roof in the United States gets about 4 hours of usable sun per day. We know the sun shines more than 4 hours, but “full sun” is a measurement that combines all the parts of the day when the sun is lower in the sky into one number.

Using 4 hours of full sun, gives you this equation: 250 watts x 4 hours. That’s 1 kWh (1,000 watts) in a day per 250-watt panel.

If you multiply 1kWh per panel by 30 days in a month, you’ll find that each 250 watt rated panel will produce about 30 kWh in an average month.

The average-sized solar panel takes up an area of 17.6 square feet and produces 265 watts under direct sunlight. That translates to just over 15 watts per square foot.