

Watts, Kilowatts, and Megawatts, And How To Convert Them

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When you start gathering information about [solar panels](#) for your home or business, it can be a big help to learn some of the terminology. In your research, you'll notice that residential solar panel systems are always described in terms of kilowatts. To understand what kilowatts are, it helps to understand megawatts. So, what are megawatts and kilowatts, and how are they related to each other?

What are Megawatts and Kilowatts?

Watts are a basic unit of measurement of amounts of electrical power. Solar panel wattage expresses the rate that electricity flows through the electrical system.

Watt	A watt is a tiny amount of electrical power. The average household uses thousands of watts of electricity. Convert watts to kilowatts to simplify.
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Kilowatt	A kilowatt equals 1,000 watts. So, instead of saying your home uses 8,000 watts of electricity, you can just say it uses 8 kW.
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Megawatt	A megawatt equals a million watts. That means a megawatt is a thousand kilowatts, which is a million watts. An electric company delivers megawatts of power across its public grid.
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Gigawatt	A gigawatt equals a billion watts! Gigawatts are used to express how many megawatts to power a city, for example, or a nationwide power grid.
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To Convert Watts and Kilowatts

The relationship between watts, kilowatts, and megawatts is this:

One kilowatt (kW) equals 1,000 watts.

One megawatt (MW) equals 1,000 kilowatts.

NOTE: 1,000 kW equals 1,000,000 watts.

To convert kilowatts to megawatts:

Divide the number of kilowatts by 1,000

For example: $8 \text{ kW} \div 1,000 = 0.008 \text{ MW}$

MW to kW Quick Conversion Table

For easy reference, you can just use this conversion chart to convert megawatts to kilowatts at a glance. Here's a quick way to convert MW to kW.

Kilowatts to Megawatts Conversion Table

Kilowatt (kW)	Megawatt (MW)
10 kW	0.01 MW
100 kW	0.1 MW
1,000 kW	1 MW
5,000 kW	5 MW
10,000 kW	10 MW
15,000 kW	15 MW
20,000 kW	20 MW
100,000 kW	100 MW
1,000,000 kW	1,000 MW

Difference Between Kilowatts and Kilowatt-Hours

Yes, a kilowatt (kW) is a unit of measurement of an amount of electrical power. A kilowatt-hour (kWh) is a unit of measurement of the amount of electrical power that is consumed over the specified period of time. You can recognize the kWh quantity when you're reading your utility bill. It's the measurement used to represent the amount of your energy used during the billing period.

How Many Kilowatts Do Solar Panels Produce?

A solar panel's output wattage is how much electricity it can produce. Typical modern solar panels are rated for power output of around 350 to 400 watts.

But, how many megawatts does a house use? A home uses multiple solar panels. Combined, your panels will produce thousands of watts of electricity. For example, if the wattage of your solar panel system is 8,000 watts, expressed in kilowatts, your system is 8 kW.

State-of-the-Art Solar Panels from Solarise Solar, Colorado

Your Solarise Solar expert will calculate how many kilowatts of electricity are used in your home and the number of solar panels you need to supply all of your electrical needs.

For questions about solar panel sizes and wattage, call Solarise Solar at (719) 315-3034, or contact us here online to schedule a free home Energy Analysis.
