



FOR SOLAR LESSEES

Cutting Your Power Bill Down to Size

How we use power, as well as how we make or buy it, has large effects on our electric costs

Why is the power company still sending me an electric bill?

Utilities, whether deregulated or cooperatives, differ in how they charge and credit for electricity. “Grid-tied” solar systems are both able to **push energy** to the grid, as well as **pull energy from** the grid. Utilities typically charge a small monthly connection fee to stay connected to the grid, even when a system is mostly feeding energy to the grid.

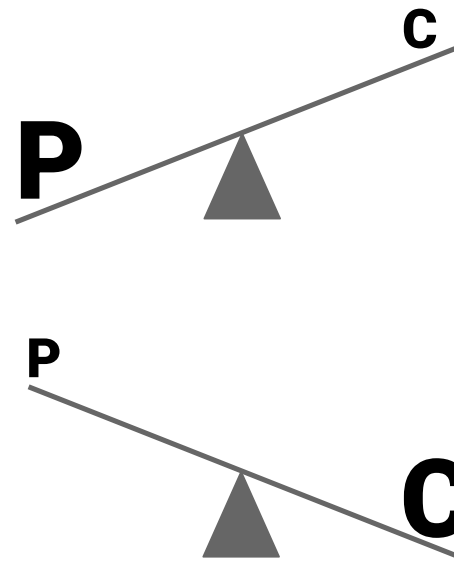
Some homeowners choose to go “off-grid” and become completely free of the public grid, but this is typically much more expensive, because you remove the option of relying on the public grid for **any** power.

Keep an eye on what your utility is actually paying you for energy the system feeds to the public grid. If they aren’t giving you a fair credit for this power on your monthly bill, consider having batteries installed so that the power the system is making can be instead stored during high production and fed into your home, rather than the grid.

Will having solar on my rooftop completely eliminate my electricity bill?

Solar is very powerful, but it’s not magic. Installing a solar system builds an actual power plant on your rooftop, allowing you to harvest the free energy that falls on it from the sun. Your home will actually be able to **produce energy**, unlike other homes that don’t have solar to generate usable power. Most homes only **consume power**, and don’t make any power at all, but instead rely entirely on the public power grid to bring electricity to it for use.

As far as eliminating your electric bill, it depends! It’s actually a game between **Production** (energy made) and **Consumption** (energy used). Think of it like a see-saw on the playground. If your energy production is large and your consumption is small, your system will feed a lot of power back to the grid (or into batteries). Utilities often pay you for that excess production, making your bill go down (or even negative, where you are paid by the utility company):



On the other hand, if consumption grows large while production is small, the solar system is still helping push the power bill down, but the home is consuming more power than the system makes, so the public grid will make up the difference, and pushing power bills up.

The key to cutting your bill down to size is making more energy than you use. By having a solar rooftop power plant, you're already ahead in the game, because you have something non-solar homes don't have - the ability to make power.

I'm concerned the solar system isn't working properly or producing enough energy.

The Lessor on your solar lease is obligated to keep the system functioning correctly. If you experience outages, please contact the servicing company and alert them about the issue. They may be able to correct the problem remotely - if not, they will send a technician to diagnose and solve the issue.

Over time, growing trees on your property may start "shading out" the solar panels, blocking their ability to receive full sunlight. This is especially true of trees on the south and west sides of your home where sunlight will be at its most intense. When this is the case, trim trees so panels have full access and give you maximum energy production.

Also, be aware that solar exposure varies throughout the year, with more sunlight received in the summers than in winters, and on sunny days than in rainy weather. The system makes more or less power with these conditions, and this does not indicate anything is wrong with the system. You can expect that energy production will vary throughout the year, as the sun provides more or less solar energy to your rooftop.

So how can I cut down my home's energy consumption - and power bills?

Broadly speaking, home energy is used in three ways:

(1) **Heating Ventilation and Air Conditioning (HVAC)** - heating in winter, and cooling in summer by your furnace, heat pump and air conditioner, and the

leakage or movement of this conditioned air through the home's doors, windows, walls, floor and roof. How you set your thermostat, how efficient your HVAC equipment is, and how "air-tight" or "leaky" your home envelope is all affect your home's power usage.

(2) **Appliances** - kitchen appliances (oven, refrigerator, dishwasher etc), water heater, laundry appliances (washer and dryer), chest freezers, pool pumps and other major appliances each contribute to demand. Some of these (such as ovens) may be significant power users.

(3) **Lighting and Devices** - interior and exterior lighting, TV and AV equipment, computers and office equipment, phones and small electronics, hair dryers and electric razors and numerous other devices each add a small load on home power that together adds up.

The strategy for cutting down power usage is conceptually very simple: eliminate wasted energy, so that we only use the energy that we need. Practically, this is not as simple, because we often don't even know where energy is being wasted. The best place to start is with a **home energy audit**, to discover where all your energy is being used or wasted. YouTube has many excellent videos about DIY energy audits, including how to use an **infrared camera or a thermal camera app on your phone** to "see" where energy is moving through your home's envelope.

Once your audit identifies the most crucial places that conditioned air is leaking, **weatherize your home** by adding insulation, caulk or weather stripping that prevent air leakage. These will help your home keep the heated or cooled air rather than losing it to the cold or hot outdoors. States often have programs to assist you with weatherizing, such as: <https://www.tdhca.texas.gov/home-weatherization-tips-energy-savings> and tips for saving money: <https://powertosavetexas.org/>

The second way to reduce energy consumption is to consider upgrading doors, windows and appliances with **more energy efficient options**. Though this can pose an initial expense, many of these will provide you with federal income tax credits: <https://www.energystar.gov/about/federal-tax-credits> or state help: <https://www.tdhca.texas.gov/help-for-texans>
More efficient appliances and home systems use less energy than less efficient ones, resulting in lower power bills for you.