

---

## Is a no-money-down lease the best way to get solar?

Unlike a car lease, a solar lease is a long-term commitment, usually 20 years. With a lease, the solar company charges you for electricity produced from your system at a fixed rate for the length of the lease. You pay no money down, but the cost plus interest is in the monthly payment. Some leases also have annual escalators that will significantly increase your payment over time.

Before signing a long-term lease, ask yourself: Is my system sized right? Do I plan to own this home for 20 years or more? What if the price of electricity falls but I am locked into higher payments? What warranty does the contractor provide, and who will repair the system if it breaks 10 years from now? Ask your installer or contractor whether a lease is the right choice for you.



---

## Where can you learn more?

The Hawaiian Electric Companies provides Locational Value Maps to show an estimate of the distributed generation on your neighborhood circuit for both minimum daytime and peak circuit loads. The maps can help you understand whether your application for rooftop solar may encounter delays due to a lot of systems already in place or approved. Visit [hawaiianelectric.com/lvm](http://hawaiianelectric.com/lvm).

# Sizing rooftop solar right



## Bigger isn't always better – here's how to maximize savings

At the Hawaiian Electric Companies, we want to help you cut your electricity bills.

Rooftop solar may be a way to control energy use and save money. One important decision is the size of your system. We recommend a system that's the right size for your household. Buying (or leasing) a system bigger than you need will cost more but not necessarily save more than a right-sized system.

### What size system should you consider?

It depends on how many are in your household and on your lifestyle. For a household using 500 kilowatt-hours a month, 2.5-kilowatt system is about right. If you use less than 500 kWh per month, savings may be too small to justify the cost.

### Why not get the biggest system that can fit on your roof?

A larger system doesn't necessarily mean larger savings, especially if you don't use much electricity. It could mean you're paying unnecessarily higher costs for your system. An oversized system may generate more electricity than your household uses but you won't get credit for all the excess. Also, solar capacity on your neighborhood circuit is limited. So if you install more PV than you need, there's less room left for your neighbors.

## How to size rooftop solar

### 1. Right-sized

A typical household uses about 25 percent of its electricity from 9 a.m. to 3 p.m., so a system that produces more than that daytime demand is considered oversized. Recognizing that customers have different needs, this chart shows the estimated right size system to meet household energy needs and optimize credits for excess energy sent to the grid.

Right-Sizing Criteria for Customer Grid Supply Program*	
Average monthly usage in kWh	Recommended PV Size
300 - 500	2.50 kW
500 - 800	2.75 kW
800 - 900	3.00 kW
900 - 1000	3.50 kW
1000 - 1100	3.75 kW
1100 - 1200	4.25 kW
>1200	5.25 kW

\* All figures used are estimates only and are for illustrative purposes. Always check with a licensed installer or contractor to determine the optimal size of your PV system based on your specific circumstances and for the portion of your electricity consumption that you wish to offset with solar.

### 2. Oversized

An oversized system generates more electricity than the household uses and exports the excess to the power grid. Under the Customer Grid Supply program, credits for excess power don't carry over to the following month. So an oversized system is sending energy to the grid, but you won't be credited for it.

## What happens to your bill credits with an oversized system?



### Bill for Oversized System

#### Steps to Calculate Bill:

- Determine credit based on lesser amount**  
*Example:*
  - ❖ Energy received from utility: 350 kWh
  - ❖ Energy sent to utility: 750 kWh  
(Oversized by 400 kWh)
- Calculate your Customer Grid Supply credit (\$0.1507, O'ahu Rate)**
  - ❖  $(350 \text{ kWh} \times \$0.1507) = \$52.75$
- Apply credit to bill**

$$\begin{array}{r}
 \$97.92 \text{ (Bill before credit applied)} \\
 - \$52.75 \text{ (CGS credit)} \\
 \hline
 = \underline{\underline{\$45.17 \text{ Final bill amount}}}
 \end{array}$$

#### Credits lost from oversizing

- ❖  $400 \text{ kWh} \times \$0.1507 \text{ (O'ahu Rate)} = \$60.28$

*Note: Excess credits do not roll over month to month*

*By oversizing, you're paying for a larger system than you need and sending electricity to the grid that you won't get credit for.*