HAWAII ENERGY CONNECTION®
sustainable energy solutions

Meter Enclosure Considerations for Solar Installations

As a licensed and bonded electrical contractor, the City and County permitting department holds us to very high standards. One of those standards is to adhere to strict electrical safety guidelines that are published as part of the National Electric Code (NEC). One particular rule makes certain that the meter enclosure installed on your home is capable of handling the maximum amount of utility and solar power to your home at the same time. Adding a solar photovoltaic system to your home is like adding a second utility connection on the opposite side of the meter. We must now consider the rating of the meter equipment located between these two power sources, more specifically the buss bar rating. This is commonly referred to as the NEC 120% rule.

The Code:
In the 2011 National Electrical Code (NEC), the language in 705.12(D)(2) is straightforward:

"Bus or Conductor Rating. The sum of the ampere ratings of overcurrent devices in circuits supplying power to a busbar or conductor shall not exceed 120% of the rating of the busbar or conductor."

In the 2014 code, this one sentence has been revised to be several paragraphs long with different scenarios. However the philosophy holds true, and once you understand the philosophy of the simpler 2011 version of 705.12(D)(2) you will be able to understand NEC 2014's more sophisticated version.

A short video that explains this rule can be found at the link here:
https://www.youtube.com/watch?v=q_u4diFV3vQ

If you are planning on upgrading your existing utility service or adding new service during new home construction, your electrician should consider a type of meter enclosure that accommodated the additional PV power while adhering to the NEC 125 rule. **The type of meter enclosure is much more important than just maximum amp ratings.** Just upgrading the amount of service amps to your home does not necessarily mean that you can add more PV amps.

Below are a few meter enclosures that are typically readily available and have been found to be very adaptable to solar photovoltaic and energy storage (battery) applications. Please have your electrician contact us directly at (808) 524-7336 for more information or to confirm the meter enclosure that you are planning to use.

Manufacturer / Model	Rated Amps	Available Spaces / Circuits	Dimensions
EATON / MBE24L200BTS	200A	4/6	28.38"H x 14.44"W x 5.38"D
EATON / MBE24L125BTS	125A	4/6	23.88"H x 14.44"W x 5.38"D
SQUARE D / SC12L200S	200A	12/6	30.3"H x 21.8"H x 7.5"D
GE / TSL412LSCU	125A	4/6	23.5"H x 10.8"H x 6"D