

Considerations for Solar in Tiny Houses

The following is a discussion on the best practices and guidelines for integrating solar within a tiny house.

INTRODUCTION

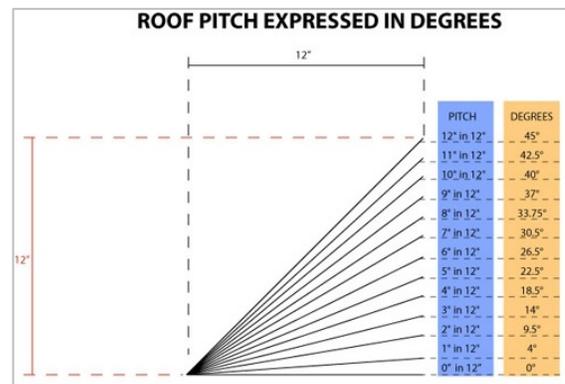
Renewed interest in environmental concerns has resulted in many varied approaches to individual impact on the environment including, but not limited to, Tiny Houses. For others, Tiny Houses simply mean living independently. Regardless of the motivations surrounding them, Tiny Houses mean having the opportunity to work with solar. If possible, it is best to integrate solar into the home during the planning process of the building. It is always best to take into account potential complications and limitations of solar when deciding to incorporate solar into your home; this page attempts to give a brief overview of Tiny Houses.



📍 LOOKING AT THE SPECIFICS

THE ROOF

The roof should be designed to have the solar modules mounted to it, so it should be preferably at an angle 35°-45° and reinforced to support the weight and wind load of the solar modules (including when the house is mobile).



STORAGE BATTERIES

As the storage batteries can be quite heavy, it is best to place them near the axle; if possible, they could be recessed in the floor to save space and lower the center of gravity. Extra space should also be given for the electronics: inverter, charge controller, etc. Generally, this should be installed as close to the batteries as possible to minimize the length of the DC wires.



POTENTIAL COMPLICATIONS AND LIMITATIONS

- Occasionally, it will not be possible to integrate the solar system into the house due to design complications and/or space issues. In this case, a separate area will need to be created for the solar array; the solar array will need to be anchored down, so that it does not blow over in the wind.
- To prevent potential weather damage to the system, it is crucial that a weatherproof enclosure be used to hold the batteries and miscellaneous electronics. Additionally, thought should be taken as to how to disassemble and pack the system for transport. Click on the text to view our custom enclosures!
- Due to the unique energy needs and available space, potential limitations of using solar revolve around power output. This simply requires a little thinking about consumption needs and means using propane loads for the stove/oven, heating, hot water, and refrigeration. While this may not necessarily be the case for every user, it is a potential limitation which should be considered.

FINAL CONSIDERATIONS

Whether the solar system is integrated or separate, care should be taken to ensure the solar modules are facing south and free of shade. While it may seem complicated, with careful consideration and planning, adding solar to a tiny home is a wonderful way to make a positive environmental impact and a move towards greater independence.