

# Solar Power Systems

## Summary Guide

**P**hotovoltaic systems, also known as "PV Systems", "Solar Arrays," or just "Solar Panels" are an allowed accessory use in all zoning districts. There are restrictions on the height and location of these structures, but generally the use of PV systems is limited or enhanced by factors like roof orientation and available clear area, shading, and any structural limitations of the roof itself.

### Size and Use Restrictions:

- PV Systems are allowed by right for on-site energy generation.
- Ground-mounted PV Systems must be located within a side or rear yard and cannot exceed 8 feet in height.
- Roof-mounted PV Systems cannot exceed the peak of the roof on which they are mounted, be flush mounted if visible from a public street, and have all components concealed and finished in a color similar to the building itself.
- PV Systems contemplated for commercial, off-site, or utility-scale use must obtain a Special Use Permit.

### Preserve Rooftop Space for Solar Collectors

The south-facing portion of the roof should have a clear area of sufficient size for a PV System. An area of 100 square feet per kilowatt (kW) or more should be preserved for solar. Residential systems are 3–7 kW, depending on house size and other factors.

### Flat Roof Configuration

Ensure the roof is accessible and is safe. All PV systems should be near the middle of the roof, away from parapets and HVAC equipment.

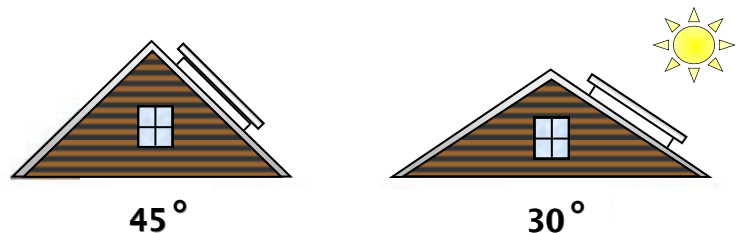
### Allow for Additional Weight

PV systems add 3–6 psf to the roof dead load, and up to 45 psf at certain points. Some roofs on single family homes can hold systems up to 15 kW; larger residential systems or commercial-grade systems may need reinforcement.

### Inside...

Allow space for the inverter, conduit, breaker, and an electrical service of 200 amps.

**30 degrees is the optimum roof pitch for PV systems in the Kansas City region**



### Site Considerations

#### Southern Exposure

A large south-facing roof angled away from the street will maximize PV effectiveness while minimizing visual impact.

#### Stay in the Sun

Prevent shade from interfering with the area. Plant species that will shade windows and walls but not the solar collector on the roof.

### *What about Installing PV Systems In a Historic District?*

If the property is located in a historic district, a Certificate of Appropriateness is required prior to obtaining building permits

**Please contact the Preservation Office for more details on historic districts at (816) 439-4537 or at [preservation@libertymo.gov](mailto:preservation@libertymo.gov)**