

COMMERCIAL SOLAR READY

Step one is to answer the following questions:

- 1) What will the building's use be?
 - a) Permanent occupancy residential (not hotels, motels, etc) or,
 - b) All other

- 2) How many stories above grade will the building be? Except for mechanical penthouses, include the top floor regardless of its square footage.
 - a) Four or fewer or,
 - b) Five or more

If box a) was checked in both 1 and 2 above, the project will fall under the residential solar ready provisions. Please refer to the residential requirements.

If box b) was checked in either of the above, the project might fall under the commercial solar ready requirement meaning rooftop space could be required to be set aside for a possible future solar array. The following exceptions would apply and would exclude the project from the solar ready requirement:

- Potential Solar Area (defined below) < 2,000 square feet (185.8 square meters)
- High hazard buildings (Group H)
- Roofs located within the downtown network as identified in Appendix A of the current Austin Energy Distribution Interconnection Guide
- When compliance with 2015 IECC, section C406.5 is demonstrated

If the project does not qualify for any of these exceptions then an area on the roof, called the Solar Ready Zone (SRZ), must be identified. The minimum area for this zone is calculated as:

Solar Ready Zone Area = ½ of the “Potential Solar Area”

The Potential Solar Area is the area of the roof that lends itself to a solar array. It's defined as:

Potential Solar Area = Total gross roof area less the “Affected Area”

“Affected Area” describes the parts of a roof that *don't* lend themselves to a solar array. Because that's expected to receive scrutiny in the coming years, it makes sense that it be separately defined. Currently, the affected area is comprised of the sum of the following, non-overlapping areas:

- Areas of the roof that are shaded for at least 50% of daylight hours annually of the year the project is permitted.
- Areas of high pitched roofs (roofs with a pitch>2:12) that are oriented from 300° northwest, clockwise to 90° east.
- Gross area of all skylights.
- Area of rooftop equipment, including required access paths.
- Those areas of the roof required by the fire code or by other sections of the Land Development Code to not have solar equipment.
- Areas of roofs used as heliports or for rooftop parking.
- Green roofs and occupied rooftop areas.

The following table is intended to aid in the above calculations:

	Gross Roof Area
	<i>Areas of the roof that are shaded for at least 50% of daylight hours annually of the year the project is permitted.</i>
	<i>Areas of non Low-Slope roofs (roofs with a pitch>2:12) that are oriented from 300° northwest, north to 90° east.</i>
	<i>Gross area of all skylights.</i>
	<i>Area of rooftop equipment including required access paths.</i>
	<i>Those areas required by the fire code or by other sections of the Land Development Code to not contain solar equipment.</i>
	<i>Areas of roofs used as heliports or for rooftop parking.</i>
	<i>Green roofs and occupied rooftop areas.</i>
0	Affected Area (Subtotal. Check that these areas do not overlap)
0	Potential Solar Area (Gross Roof Area less Affected Area)
x 0.5	
0	Solar Ready Zone Area

The Solar Ready Zone can lie anywhere on the roof that isn't part of the Affected Area and it can be comprised of multiple sub-areas. Each sub-area must be at least 80 square feet (7.432 square meters) and must be a rectangle the short side of which measures at least 6 feet (1.83 meters).

Other requirements:

- The structural loads to which the roof was designed must appear on the construction documents. This is to allow an experienced solar contractor to “eyeball” these documents and provide an educated guess as to whether the roof will support an array. Final determination of structural adequacy must still come from a registered design professional as specified by code.
- An interconnection pathway must be defined. It's not necessary that a solar installer use this pathway, only that it be considered and specified during design.
- A location in the electrical distribution system must be permanently marked as “For Future Solar Electric”. Again, the array is not required to make its connection at this point, only that it be considered during design and labeled.

A note on the Affected Area: Generally, any method deemed acceptable by the building official for determining what is shaded and what is not shaded, or what constitutes part of an affected area, can be used as long as it adheres to the guidelines above. Since the City's familiarity with the range of available methods is still limited, all reasonable methods should be accepted. If a particular approach is determined to be unacceptable and disagreement with that determination persists, then as with any dispute, an appeal to the appropriate review boards and/or commissions may be made.