



Solar Farm Impact On Nearby Property Values

Is a solar farm planned to be built near your rural neighborhood?



If so, how will it affect your property value?

Some solar farms do have an impact on property values—some positive, some negative. Of the 980 utility-scale solar farms studied across 23 states, the majority, 66%, have no impact whatsoever.

For those remaining solar farms that do impact property values, the average change in value ranges from -7% decrease in value to +3% increase in value. When there's a negative impact, it's likely due to proximity and size of the solar farm. Starting at one mile away, the closer to the solar farm and the larger it is, the more likely the value will decrease. At 1/10th mile away, the property value could drop by as much as -7% to -12%.

The studies referenced herein are thorough and represent the effect of solar farms on property values in several states. Data from actual residential home sales located near utility-scale solar farms form the basis for the study results.

Nonetheless, results from these multistate studies only form a statistical profile for estimating property value impacts in general. That is, if, let's say, 66% of property values are unaffected, 11% increase in value, and 23% decrease in value, these statistics only give the odds for how much, if at all, any particular property will be affected. They really can't be used for predictive purposes. In other words, who can say for sure what will be so for *your* property?

The best study also attempts to answer that question. It's a thorough independent study titled, *An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations*. This study, directed by Dr. Varun Rai and completed in 2018, was produced by the Policy Research Project (PRP), LBJ School of Public Affairs, The University of Texas at Austin. It's a 68 page research paper and represents 23 states of the 42 known to have utility-scale solar farms as of 2018. Here's a short excerpt:

"... some respondents did estimate a negative impact on home prices associated with solar installations. When averaging estimates across all respondents, the estimated impact was negative up to 1,000 feet, one half mile and one mile for 1.5MW, 20MW and 102MW facilities, respectively. The averages suggest that respondents estimate that greater proximity to utility-scale solar installations is linked to a more negative property value impact, and that those impacts would be larger as the size of the solar installation increases. In discussing the averages, however, it is worthy of note that highly negative estimates from a few respondents appeared to be pulling the average away from the median. For a discussion of property value impacts in dollars, see Appendix D.7."

— Dr. Varun Rai, Project Director

Opinion Section

Here's a real estate possibility to consider. This hypothetical example serves to illustrate that a general statistical profile may not be predictive for a specific property. This made-up property is only 250 ft from the perimeter of the solar farm. In part a), statistically this property's value would be 12% less than market value, but if this were a real property, it probably would be sold at above market value. In part b), it would be below market value.

a) Let's say a home for sale has a spectacular view through expansive windows of a snow-covered mountain 50 miles away. The home faces North toward the mountain. Directly behind the home, on the South side, is a solar farm with 200,000 panels—a virtual sea of black silicon. With the solar arrays behind the house, the view isn't obstructed. The panels face South, so the front of the array faces away from the back of the home. This is an Agrivoltaic farm with a vineyard. The solar array is further obscured by acres of grape vines. In all, it's an attractive property. Maybe someone would even pay a premium price because of the "cool" factor and bragging rights to live next to one of the largest Agrivoltaic vineyards in the country. Plus, it's within walking distance of the winery.

b) Let's change one parameter in this hypothetical situation. The home still faces North, but now it's located on the opposite side of the solar farm. So, it now faces the South side of the sea of solar panels. Although solar panels use a low-reflective glass, at some point during the day, depending on latitude, the panels will have a peak reflectivity. Thousands of panels together will be highly reflective during this peak period—combined, they'll blast the expansive home windows with intense light reflected off the panels. The glare is so great the curtain must be drawn during that time of day. The beautiful vineyard is also obscured, because the plants need to be on the shade-side of the arrays. Worse, no potential buyer seems to like living with glare nor looking upon a sea of black-blue silicon nor needing to close the drapes every day. The home no longer sports a "cool" factor.

Just by changing the location of the home relative to the South-facing arrays, the home's value plummets from asking a premium price to hard to sell even at below market value. This type of situation was not identified in any of the studies I read, so perhaps this is non-existent or very rare.

In any case, this hypothetical example serves to show that we need better statistical profiling to estimate impact on property value. These studies have yet to capture impact on property value as a function of the geospatial location of the property relative to solar arrays.

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References

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Solar's Impact On Rural Property Values

[An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations](#)

[Study: Solar can hurt home values if it displaces scarce suburban greenspace](#)

[Property Value Impact Study for Proposed Solar Farm, McLean County, IL](#)

[Adjacent Property Values Solar Impact Study: A Study of Nine Existing Solar Farms](#)

[Homeowners often oppose nearby solar. But do projects really hurt property values?](#)

[Study: Solar farms reduce home values](#)

[Landowner Leasing for Utility Scale Solar Farms](#)

[Rural Realtor's Opinion Piece](#)

[Too early to tell how solar farms impact land value](#)

[PRP Research](#) suggested search terms: *solar farm property value impact* or *solar farm impact rural land value*

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