

# Devaluation of Property Values

A discussion with a renewable energy developer...

When attending the Grange Solar, LLC public meeting on September 5, 2024, hosted by Open Road Renewables (ORR), I spent a reasonable decent amount of time speaking with ORR Senior Management regarding a variety of issues, however three of the primary topics were “mis/dis-information”, “community divisiveness”, “and devaluation of property values”. I did attempt to convey that although separate issues, they go hand-in-hand.



In attempting to give examples, I pointed out that the Grange Solar – SOLAR AND PROPERTY VALUES document (page from this document below) on their website was nothing less than what I would believe to be disinformation. As any salesperson through the President of a large renewable energy development company would do, I got pushback and said I was (and I paraphrase) “comparing apples to oranges” and/or “cherry picking data”. I shared my experiences in speaking with real estate professionals that it is either their experience and/or strong belief that utility-scale solar will cause a property value to decline. For which, I was asked, “Who has said that”.

## PROPERTY VALUE STUDY RESULTS



- No statistically significant impact from nearby solar projects on property values.
- Property values can actually increase near solar farms, likely due to the positive impact of increased local tax revenue/services.
- Screening and setbacks can ensure that nearby property values are not negatively impacted.

## A REVIEW OF KEY PROPERTY VALUE STUDIES

### American Society of Farm Managers and rural Appraisers

#### Summary

- Reviewed and summarized studies on solar facilities and property values
- Found the studies generally show no negative impact, and sometimes a positive impact

### University of Rhode Island Study

- Analyzed 400,000 transactions near solar projects over the course of 15 years.
- Found no negative impact on property values from solar farms located in rural areas.

### CohnReznick Study

- Examined sales of single-family homes and agricultural land near 9 solar facilities in Indiana and Illinois.
- Found no negative impact on property values due to proximity to the 9 facilities.

### Lawrence Berkley National Laboratory Study

- Analyzed 1.8 million home sales near solar projects in six states
- The study found on average a statistically insignificant impact, with the highest negative impact in the states with the highest population density (ex. N.J.).
- The state with both the most solar installed (over 930,000 sales transactions, more than half of the dataset in the study) and the largest rural solar projects (like Ohio) actually showed a statistically insignificant positive property value impact from nearby solar projects.

I want to provide what people/organizations, other than myself, believe and/or know to be true on this topic. I believe this information will help provide additional information to counter a presumed discrediting of my opinion by Grange Solar representatives. Citations to each provided for you to perform your own due diligence and analysis.

### Where should utility-scale solar be located

From AMERICAN PLANNING ASSOCIATION's - *Planning for Utility-Scale Solar Energy Facilities* (Sept./Oct. 2019) – Darren Coffey, AICP

- *“Unlike many land uses, these solar installations will occupy vast tracts of land for one or more generations; they require tremendous local resources to monitor during construction (and presumably decommissioning); they can have significant impacts on the community depending on their location, buffers, installation techniques, and other factors; and they are not readily adaptable for another industrial or commercial use, hence the need for decommissioning.”*
- ***“While public officials tend to focus on the economics of these facilities and their overall fiscal impact to the community, the emphasis for planners is on the direct land-use considerations that should be carefully evaluated (e.g., zoning, neighbors, viewsheds, and environmental impacts).”***
- *“In short, utility-scale solar facility proposals must be carefully evaluated regarding the size and scale of the use; the conversion of agricultural, forestry, or residential land to an industrial-scale use; and the potential environmental, social, and economic impacts on nearby properties and the area in general”*
- *“Solar facilities can be appropriately located in areas where they are difficult to detect, the prior use of the land has been marginal, and there is no designated future use specified (i.e., not in growth areas, not on prime farmland, and not near recreational or historic areas). Proposed facilities adjacent to corporate boundaries, public rights-of-way, or recreational or cultural resources are likely to be more controversial than facilities that are well placed away from existing homes, have natural buffers and don’t change the character of the area from the view of local residents and other stakeholders.”*
- *“Planners and other public officials should keep in mind that even if a facility is found to be substantially in accord with a comprehensive plan, that does not mean the land-use application must be approved. Use permits are discretionary. **If a particular application does not sufficiently mitigate the adverse impacts of the proposed land use, then it can and should be denied regardless of its conformance with the comprehensive plan.**”*
- *“While the benefits of clean energy are often touted, the impacts of utility-scale solar facilities on a community can be significant. Applicants often say that a particular project will “only” take up some small percentage of agricultural, forestry, or other land-use category— but the impact of these uses extends beyond simply replacing an existing (or future) land use. **Fiscal benefit to a community is also often cited as an incentive, but this alone is not a compelling reason to approve (or disapprove) a land-use application.**”*
- ***“If not done properly, these uses can change the character of an area, altering the future of communities For generations.”***
- *“A solar facility located by itself in a rural area, close to major transmission lines, **not** prominently visible from public rights-of-way or adjacent properties,*

*and not located in growth areas, **on prime farmland**, or near cultural, historic, or recreational sites may be an acceptable land use with a beneficial impact on the community.”*

## **Property devaluation**

We have known about the University of Texas Study for some time (released in 2019) and the University of Rhode Island Study (released in 2020). More recently, Ms. Mary Clay, (MAI) has provided a summation of five additional peer-reviewed studies. These additional analyses were initiated because of the public’s concern about the impact of Solar Power Plants on the value of nearby property. These analyses include the following Studies:

- University of Texas Study, 2018
- Abashidze PhD Dissertation (NC State University), 2019
- University of Rhode Island Study, 2020
- 2020 Annual Meeting of the American Real Estate Society Meeting, 2022
- Netherlands Study, 1985 – 2019
- Lawrence Berkley National Lab Study, 2023
- University of Birmingham, United Kingdom, 2023

To give you a quick overview for what this research has produced, consider the following highlights:

1. Dr. Tomas Malone at the 2022 American Real Estate Society Meeting reported that solar farms could cause the **value of homes within 1 km to drop by as much as 8.6%.**
2. The 2020 Rhode Island Study found that homes located **within 0.1 mile of a Solar Installation will see their property value reduced by 7%.**
3. The 2018 University of Texas Study found that properties located **within 100 feet of a Solar Farm would see property value drop by almost 10%.**
4. Dutch scholars indicate that solar farms **within 1 km of houses will decrease house prices by about 2.6 %.**
5. The National Lab (Lawrence Berkley) found that homes **within one-half mile of a solar farm saw home prices drop by 4%, 5.8%. and 5.6% in the states of Minnesota, North Carolina and New Jersey, respectively.**
6. The 2023 British Study found that the impact of Solar Farms increases significantly for solar farms with capacities greater than 10 Megawatts.

Due to the massive size of these projects sited in Ag Zoned areas, they sprawl through the countryside, surrounding homes on multiple sides and completely engulfing rural communities. Homeowners are being forced to **LIVE INSIDE** industrial power

plants. If diminution of property values occurs in much smaller solar plants, what will happen to homes that are completely surrounded in a sea of Black Glass that is hundreds of times larger?

Solar Developers emphatically claim that there is never an injury to property values. They continue to repeat this narrative over and over, as if the more times they repeat it, the more likely it will become true. After reviewing numerous studies that prove otherwise, the truth is made clear. Common sense and experience has shown that a beautiful view, food and an agricultural farming community matters to people.

*-Dr. Herbert M. Eckerlin (Emeritus Professor Mechanical & Aerospace Engineering NC State University Raleigh, NC)*

### **Viewshed impact on viewshed**

Unlike most adverse influences upon adjacent properties that have a direct impact upon their utility to function (noise, odor, contaminants, traffic, etc.) SEGPS's predominant impact is to the viewshed.

Real Estate appraisers recognize that view affects property value. According to The Appraisal of Real Estate, "The physical characteristics of a parcel of land that an appraiser must consider are size and slope, frontage, topography, location and view...so

#### **View Characteristics**

"A view is normally considered a scene or outlook from a property. Views of bodies of water, city lights, natural settings, parks, golf courses and other amenities are considered desirable features, particularly for residential properties. Such desirable views are typically an enhancement to value. In some cases, however, a view can be considered a negative attribute. A vista of incompatible land, dilapidated buildings, junk vehicles and other undesirable features can be detrimental to value. Allegations of value diminution most often arise from situations in which the view is altered or changed. Examples might include the blockage or obstruction of a desirable view or the creation of an undesirable view. The rezoning of a neighboring property to allow for an undesirable land use could legitimately result in a negative impact on value when such rezoning was not known or anticipated on the date of value."(51)

Ultimately, issues relating to view diminution are dependent on relevant market data. The value of an obstructed view can be measured by the difference between properties with and without similar views. (52)

"View diminution, therefore, is any impact on the ability to see or be seen that is perceived by the market as negative. As usual, what the market considers to be a negative impact depends on the actual property in question." (53)

The impact of views upon property values has been studied extensively for the past 25 years. These studies have indicated a range of marginal price effect for homes abutting amenities such as lakefront vacant lots: 91.00 to 223.00 percent; ocean front lots: 47.00 to 147.20 percent; lake front 7.50 to 126.70 percent; golf course vacant lots: 7.00 to 85.00 percent; rivers/streams: 3.00 to 54.4 percent; forest/farms: 1.50 to 35.00 percent; golf course: 7.00 to 28.00 percent; trails and greenways: 3.40 to 20.20 percent; and urban parks: 1.00 to 20.00 percent. (54)

"Clearly, view amenities are valuable, and different types of good views can have significantly different quantitative effects on property values." (55)

With respect to the intrusion of SEGPs into the landscape, what happens when desirable views are blocked? "In real estate, a view can generally be defined as the ability to see or be seen. View diminution, therefore, is any impact on the ability to see or be seen that is perceived by the market as negative." (56)

"Since views from a residential property often carry a large premium, changes to a desirable view may be perceived by the market as having a negative impact on value. When a desirable view is blocked, the question of damages is often a question of abutter's rights-a property owner's rights to air, light, view, visibility and access." (57)

51 *Bell, Ibid.*: 146.

52 *Ibid.*

53 *Anderson, Ibid.*: 28.

54 Jay Mittal, "Valuation Capitalization Effects of Golf Courses, Waterfronts, Parks, Open Spaces, and Green Landscapes-A Cross Disciplinary Review," *Auburn University, JOSRE, Vol. 8. No. 1, 2016*: 62.

55 James R. Rinehart, PhD. and Jeffery J. Pompe, PhD., "Estimating the Effect of a View on Undeveloped Property Values," *Appraisal Journal, January 1999*: 61.

56 Orell Anderson, MAJ, "The Value of a View," *Right o/Way, March/April 2017*: 28.

57 *Ibid.*: 28.

## **Drainage and Erosion Impacts on Property Value**

“A 2021 storm water drainage study was prepared for the Henderson County, Kentucky case, Patricia Kushino, et al v. Federal Aviation Administration, et al. This study estimated the diminution in value of an 80.00 acre woodland that was part of the 183.90 acre Williams Farm. The property was negatively impacted by the construction of a drainage ditch from the adjacent regional airport. Prior to the drainage ditch the woodland had natural drainage and a healthy stand of hardwood trees. After construction it suffered from constant flooding and become non-productive. The estimated contributing value of the woodland prior to the damage was \$3,000 per acre and after construction, its contributing value was \$850 per acre, or a loss of -72.00 percent.

A 2012 drainage study was prepared for the Fayette County case, Jerry Whitson v. Donnie Cross. This study involved the diminution in value to a rural residential tract improved with a dwelling a horse barn used for layups at the Kentucky Training Center. The property was encumbered by drainage from a pond on the adjoining tract which accumulated for extended periods of time at the front of the horse barn. The extent of the drainage rendered the horse barn non-contributing to the overall property value based on the expectations of the rental market for stalls. Although the contributing value of the horse barn was \$55,000, the cost to cure was less at \$32,614. Therefore, the estimate of damages was -13.0 percent.”

*-Various study & report of Mary McClinton Clay (Self-Employed – Engaged in commercial, industrial, and farm valuation. Primary Practice Focus – Litigation and zoning support with an emphasis on damage studies, including environmental and eminent domain.)*