



PROPERTY VALUE IMPACT REPORT – Executive Summary

IMPACT STUDY OF PROPERTY VALUES ADJACENT TO SOLAR A STUDY OF ELEVEN EXISTING SOLAR FACILITIES

PREPARED FOR:

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EXECUTIVE SUMMARY

CohnReznick has been engaged to complete a property value impact study report to determine whether existing solar farms have had any measurable impact on the value of adjacent properties. This abbreviated report summarizes the preliminary findings of that study, which the AES Corporation might include for submission in their application for entitlements for the development.

The purpose of the assignment is to determine whether proximity to an existing solar farm resulted in any significant measurable and consistent impact on adjacent property values, given the existing uses and zoning of nearby property at the time of development; address potential local concerns regarding the solar projects having a perceived impact on surrounding property values; and, provide a consulting report that can address any concerns or standards by Public Bodies.

We have included ten established solar farms in our study, focusing on similar rural and suburban areas with neighboring residential homes, that are comparable to the proposed solar farm locations in Michigan. Solar farms with a variety of output capacities have been studied because of their proximity to residential properties. We have studied the sales of properties located adjacent to the solar farms in order to see if proximity to this use results in any consistent and measurable impact on property values.

Since 1984, we have studied the impacts on adjacent land values of schools, landfills, waste transfer stations, stone quarries, cellular towers, electrical power transmission lines, “Big Box” retail facilities, levies, properties with restrictive covenants, landmark districts, environmental contamination, airports, material defects in construction, stigma, and loss of view amenity for residential high rises. Over the past seven years, we have produced detailed paired sales analysis of more than 45 existing solar farms across the United States of varying sizes to determine whether there has been any measurable impact on adjacent property values.

Methodology

CohnReznick has utilized a paired sales analysis (or “comparative analysis”) of properties adjacent to existing solar generating facilities. The paired sales analysis is an effective method of determining if there is a detrimental impact on surrounding properties.

The basic premise of this comparative analysis is that if there is any impact on the value of adjacent properties, by virtue of their proximity to a solar farm, it would be reflected by such factors as the range of sale prices, differences in unit sale prices, conditions of sale, and overall marketability. When comparing these factors for properties near the solar farm (“Test Area Sales”) to properties locationally removed from the solar farm (“Control Area Sales”), we would expect to see some emerging and consistent pattern of substantial difference in these comparative elements – if, in fact, there was an effect.

Study Features

Our study includes research and analyses of existing solar farms, including facilities in Michigan, Indiana, Illinois, Ohio, Wisconsin, Kentucky, Minnesota and other states (collectively, the “Existing Solar Farms”), as well as the property value trends of the adjacent land uses, including agricultural, single family and residential properties; a

review of published studies, and discussions with market participants. Adjoining properties physically adjacent to the Existing Solar Farms that sold in an arm's length transaction after the completion of the Existing Solar Farms were categorized as Test Area Sales that qualified for further analysis in a paired sale analysis to determine if a difference in price exists.

FINDINGS

- I. Academic Studies: CohnReznick reviewed and analyzed published academic studies that specifically analyzed the impact of solar facilities on nearby property values. These studies include multiple regression analyses of hundreds and thousands of sales transactions, and opinion surveys, for both residential homes and farmland properties in rural communities, which concluded existing solar facilities have had little impact on adjacent property values. This included:
 - a. **The University of Texas at Austin** (published in May 2018): The portion of the study focusing on property impact was an Opinion Survey of Assessors with no sales data or evidence included in the survey. The opinion survey was sent to 400 assessors nationwide and received only 37 responses. Of those 37 assessors, only 18 had assessed a home near a utility-scale solar installation, the remainder had not. Of the 18 assessors with experience in valuing homes near solar farms, 17 had not found any impact on home values near solar. A small number of those assessor respondents hypothetically surmised an impact, but none had evidence to support such statements.
 - b. In September 2024 a study prepared by Simeng Hao and Gilbert Michaud of **Loyola University Chicago's** School of Environmental Sustainability was published, "Assessing Property Value Impacts Near Utility-Scale Solar in the Midwestern United States". The study examined 70 utility-scale solar farms in the states of IL, IN, IA, KS, MI, MN, MO, NE, OH and WI, that were completed between 2009 and 2022 and measured over 20,800 average home values (AHV) from this time period. The study utilized difference-in-differences (DiD) models which compared the change in AHV for "treatment groups", zip codes which have a utility-scale solar projects, to the change in AHV for "control groups", zip codes that did not have a utility-scale solar project and were in the same state as the treatment groups. ***The results of the study indicate that utility-scale solar projects increase nearby property values by roughly 0.5-2.0 percent, with smaller projects (less than 20 MW) having more of a positive impact on nearby property values than projects over 20 MW.***

The study included models with unadjusted AHV (does not account for increase in value due to market conditions) and adjusted AHV (accounted for increase in value due to market conditions by utilizing the Case Schiller Index, which is measured using data on repeated sales of single-family homes over time). Both models indicated similar results, strengthening the finding of a positive correlation between utility-scale solar projects and nearby property values.

The study further suggested, "the positive correlation between utility-scale solar projects and nearby property values could be due to the new tax revenues, which are often used to support

local school and other public services, as well as the local employment opportunities that utility-scale solar projects can provide”.

Peer Authored Studies: CohnReznick also reviewed studies prepared by other real estate valuation experts that specifically analyzed the impact of solar facilities on nearby property values. These studies found little to no measurable or consistent difference in value between the Test Area Sales and the Control Area Sales attributed to the proximity to existing solar farms and noted that solar energy uses are generally considered a compatible use.

- II. CohnReznick Studies: Further, CohnReznick has performed studies in 22 states, of both residential and agricultural properties, in which we have determined that the existing solar facilities have not caused any consistent and measurable negative impact on property values.

For these Projects, we summarize ten of these studies which are most similar to the subject in terms of general location and size, summarized as follows:

CohnReznick - Existing Solar Farms Studied					
Solar Farm #	Solar Farm	County	State	MW AC	Acreage
1	Assembly Solar	Shiawasee County	MI	240.00	1,900
2	Lapeer (Demille & Turrill Solar)	Lapeer County	MI	48.00	365
3	Riverstart Solar	Randolph County	IN	200.00	1,400
4	Hillcrest Solar	Brown County	OH	200.00	1,940
5	Wapello Solar	Louisa County	IA	100.00	800
6	North Star Solar	Chisago County	MN	100.00	1,000
7	Innovative Solar 42	Bladen & Cumberland	NC	71.00	414
8	Turkey Creek Solar	Garrard County	KY	50.00	753
9	O'Brien Solar Fields	Dane County	WI	22.10	171
10	Grand Ridge Solar	LaSalle County	IL	20.00	158

It is noted that proximity to the solar farms has not deterred sales of nearby agricultural land and residential single-family homes, nor has it deterred the development of new single-family homes on adjacent land.

This report also includes “Before and After” analysis, in which sales that occurred prior to the announcement and construction of the solar farm project were compared with sales that occurred after completion of the solar farm project, for both adjoining and non-adjoining properties. No measurable impact on property values was demonstrated.

- III. Market Participant Interviews: Our conclusions also consider interviews with over 75 County and Township Assessors, who have at least one solar farm in their jurisdiction, and in which they have determined that solar farms have not negatively affected adjacent property values.

With regards to the Project, we specifically interviewed in Michigan:

- Ted Droeste, assessor of Delta Township has the Delta Solar Power facility in his district that was completed in 2018. He indicated that he has been actively tracking sales of properties surrounding the solar facility and stated that properties have sold fast, at market or above market and he had no evidence of declining value. Mr. Droeste stated that they have not adjusted assessed values for properties surrounding the solar panels.
- Anne Pence of National Realty Centers in Lapeer, Michigan reported that "the Lapeer Solar Farms did not have any effect on the sale of this [Test Sale] home." The buyers did not care one bit about the solar field in the back yard. The fact is that you know no one is going to be behind you when they develop a solar farm in your back yard. And there they put up trees to block the view. My in-laws also actually live at end of that street, even though they haven't sold or put their house on market, they don't mind the solar panels either. Its not an eyesore. And another house sold on that block, a raised ranch home, and it sold with no problems."
- Renee Voss of Coldwell Banker in Lapeer, Michigan noted the home she sold that backed to a solar farm sold quickly with multiple offers.
- Josh Holbrook of The Brokaw Group in Lapeer, Michigan said that solar farms had no impact on value, and in Lapeer, the community takes pride in the solar farm.
- Tara McNamara of Crown Real Estate Group in Flushing, Michigan brokered the sale of a property adjacent to the Assembly Solar project in Shiawassee County and noted that the proximity to a solar farm did not impact value and potential buyers were still willing to pay above the listing price.
- Amber Chambers of RE/MAX SELECT in Flint, Michigan reported that a solar farm project, Assembly Solar, constructed adjacent to a property she sold did not deter potential buyers and had no impact on the listing or sale prices.

To give us additional insight as to how the market evaluates farmland and single-family homes with views of solar farms, we interviewed numerous real estate brokers and other market participants who were party to actual sales of property adjacent to solar; these professionals also confirmed that solar farms did not diminish property values or marketability in the areas they conducted their business.

- IV. Solar Farm Factors on Harmony of Use: In the course of our research and studies, we have recorded information regarding the compatibility of these existing solar facilities and their adjoining uses, including the continuing development of land adjoining these facilities. This has included new single-family homes, erected within 150 feet of panels, with costs and values at the upper end of the range of surrounding home prices. It has also included new hobby farms next to existing solar, including petting zoos and recreational purposed acreage, that live in harmony with neighboring solar panels. Given the varying types of development that has occurred immediately adjacent to existing solar farms, we believe these uses are generally compatible in rural and suburban communities.

RESULTS

With regard to their impact on nearby property values, our studies of facilities of various sizes demonstrate that there is no measurable and consistent difference in property values for properties adjacent to solar farms when compared to similar properties locationally removed from their influence. This is supported by our interviews with

local real estate brokers who have stated that there is no difference in price, marketing periods or demand for the homes directly adjacent to the solar farm facilities.

We have also interviewed market participants, including County and Township Assessors (with solar facilities in their districts), to give us additional insight as to how the market evaluates farmland and single-family homes located adjacent to solar farms. Local assessors have noted that there is no evidence of negative property value impacts due to proximity to a solar farm, and local brokers have noted that there has been no effect on pricing, marketing time, nor conditions of sale.

Considering all of this information, we can conclude that since the property values of the Adjoining Property Sales (Test Area Sales) for the existing solar farms analyzed were not adversely affected by their proximity to solar farms, that properties surrounding other solar farms operating in compliance with all regulatory standards will similarly not be adversely affected, in either the short- or long-term.

Based upon our examination, research, and analyses of the existing solar farm uses, the surrounding areas, and an extensive market database, we have concluded that **no consistent negative impact has occurred to adjacent property that could be attributed to proximity to the adjacent solar farm**, with regard to unit sale prices or other influential market indicators. Additionally, in our workfile we have retained analyses of additional test subjects, each with their own set of matched control sales, which had consistent results, indicating no consistent and measurable impact on adjacent property values. This conclusion has been confirmed by numerous county assessors who have also investigated this use's potential impact on property values.

If you have any questions or comments, please contact the undersigned. Thank you for the opportunity to be of service.

Respectfully submitted,

CohnReznick Advisory LLC



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Andrew R. Lines, MAI, CRE is a Principal for CohnReznick Advisory's Valuation Advisory Services practice who has been a CohnReznick employee for over twelve years. Andrew has been involved in the real estate business for more than 20 years and has performed valuations on all real estate classes (industrial, commercial, residential, development land). Special-use valuations include affordable housing (as well as market studies), student housing, senior housing, cannabis facilities (indoor/outdoor, processing and dispensaries), landfills, waste transfer stations, golf courses, marinas, hospitals, universities, telecommunications facilities, data centers, self-storage facilities, racetracks, and corridors. Impact Study Reports have also been generated for zoning hearings related to the development of solar facilities, wind powered facilities, landfills, big box retail, waste transfer stations, private mental health clinics, cannabis dispensaries, concert/stadium venues and day care centers. He is also experienced in the valuation of leasehold, leased fee, and partial interests, as well as purchase price allocations (GAAP, IFRS and IRC 1060) for financial reporting.

Valuations have been completed nationwide for a variety of assignments including mortgage financing, litigation, tax appeal, estate gifts, asset management, workouts, and restructuring, as well as valuation for financial reporting including purchase price allocations (ASC 805), impairment studies, and appraisals for investment company guidelines and REIS standards. Andrew has qualified as an expert witness, providing testimony for cases in the states of IL, DC, VA, NY and MD, and for zoning hearings in IL, IN, MI, NY, HI, OH, KY, CO, PA, WI and MO. Andrew has also performed appraisal review assignments for accounting purposes (audit support), asset management, litigation and as an evaluator for a large Midwest regional bank.

Andrew has earned the professional designation of Member of the Appraisal Institute (MAI). He has also qualified for certified general commercial real estate appraiser licenses in AZ, CA, IL, IN, WI, MD, OH, NY, NJ, FL, GA, KY and DC. Temporary licenses have been granted in CT, CO, PA, ID, MS, KS, MT and SC.

Education

- Syracuse University: Bachelor of Fine Arts
- MAI Designation (Member of the Appraisal Institute)

Professional Affiliations

- Counselors of Real Estate (CRE)
- Chicago Chapter of the Appraisal Institute
- International Real Estate Management (IREM)
- National Council of Housing and Market Analysts (NCHMA)

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Erin Bowen, MAI is a Director with CohnReznick in Valuation Advisory Services, where she leads a team of appraisers across the country performing valuation and consulting services on a wide variety of real estate.

Ms. Bowen specializes in renewable energy, lodging, cannabis, seniors housing, large scale retail and multifamily conversion properties. Lodging work includes all hotel property types and brand segments including limited, full service and resort properties; additionally, Ms. Bowen has appraised numerous hotel to multifamily conversion properties including market rate and affordable housing. Cannabis work includes dispensaries, cultivation facilities including specialized indoor facilities and greenhouse properties, processing and manufacturing facilities. Senior's housing assignments include assisted living, skilled nursing facilities and rehabilitation centers. Retail work spans power centers, lifestyle centers, outlet centers and malls. She has appraised numerous additional properties including multifamily, office, medical office, industrial, churches, and vacant land.

Ms. Bowen has expertise in appraising properties at all stages of development, including existing as is, proposed, under construction, renovations and conversion to alternate use. Valuations have been completed nationwide for a variety of assignments including litigation, eminent domain, tax appeal, mortgage financing, estate gifts, asset management, as well as valuation for financial reporting including purchase price allocations (ASC 805). Ms. Bowen has worked on numerous appraisal assignments for eminent domain use for both condemner and land owner.

Additionally, Ms. Bowen has specialized in Property Value Impact Analysis, measuring the possible detrimental impact of economic and environmental influences on property values for a variety of property types, including cell towers, stadiums, behavioral health centers with an emphasis on renewable energy facilities including solar and wind. She has qualified as an expert witness and testified in front of power siting boards, zoning boards and planning commissions in New Mexico, Ohio, Michigan, Kentucky, Indiana and Illinois.

Education

- University of California, San Diego: Bachelor of Arts in Psychology and Theater; College Honors

Professional Affiliations

- Designated Member of the Appraisal Institute

Licenses

- Active licenses in AZ, CA, NV and OR

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Joe Ficenec is a consultant in CohnReznick's Valuation Advisory Services practice and is based in the Sacramento office. Joe specializes in Impact Study Reports, which have been conducted for zoning hearings related to the development of solar facilities and wind powered facilities. He also has experience in assisting with the appraisal multifamily, office, industrial, retail, lodging and mixed-use properties for financing and purchase price allocation purposes.

Joe graduated with honors from the University of California, Davis in May 2017 with a major in managerial economics. Prior to joining CohnReznick, Joe worked as a Real Estate Assessor for a county government and as a consultant for a nationwide real estate firm in San Francisco.

Education

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