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September 10, 2024

Erica Goad
Balanced Rock Power
310 E 100 S
Moab, UT 84532

RE: Ebba Solar Project, Lincoln County, CO

Ms. Goad

At your request, we have considered the impact of a 300 MW solar project with a 150 MW battery energy storage system (BESS) proposed to be constructed on a portion of a 3,110-acre assemblage near Limon, Lincoln County, Colorado. Specifically, we have been asked to give my professional opinion on whether the proposed solar will or will not be injurious to or diminish the use, value and enjoyment of other property in the immediate vicinity for the purposes already permitted as well as whether or not it will impede the normal and orderly development and improvements of surrounding property for uses permitted by right in the zoning districts of surrounding property.

To form an opinion on these issues, we have researched and visited existing and proposed solar projects in Colorado and other states, researched articles through the Appraisal Institute and other studies, and discussed the likely impact with other real estate professionals. We have not been asked to assign any value to any specific property.

This letter is a limited report of a real property appraisal consulting assignment and subject to the limiting conditions attached to this letter. My client is Balanced Rock Power, represented to me by Ms. Erica Goad. My findings support the application. The effective date of this consultation is September 10, 2024.

I. Conclusion

The matched pair analysis shows no impact on home values due to abutting or adjoining a solar project with a BESS as well as no impact to abutting or adjacent vacant residential or agricultural land where the solar project is properly screened and/or buffered. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar project is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

The adjoining properties have substantial setbacks from the proposed solar panels. The distances indicated for this project are well supported by the market data as sufficient for protecting adjoining property values. I therefore conclude that the project as presented will not have a negative impact on adjoining property values.

Data from the university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar project with proper setbacks and landscaped buffers.

Very similar solar projects in similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar projects have been approved with adjoining agricultural uses, schools, churches, and residential developments.

The data that I have researched includes new home construction as well as new subdivision development adjoining solar project which speaks to a finding of no impact on adjoining uses.

I note that some of the positive implications of a solar project that have been expressed by people living next to solar project include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from farming operations, protection from light pollution at night, it is quiet, and there is minimal traffic.

If you have any questions, please let me know.

Sincerely,



Richard C. Kirkland, Jr., MAI
NC Certified General Appraiser #A4359
CO Certified General Appraiser #CG.200003256

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III. Proposed Project and Adjoining Uses

Proposed Use Description

This 300 MW solar project with 150 MW BESS proposed to be constructed on a portion of a 3,110-acre assemblage near Limon, Lincoln County, Colorado.

Adjoining Properties

I have considered adjoining uses and included a map to identify each parcel's location. The closest adjoining home will be 1,060 feet from the closest solar panel and the average distance to adjoining homes will be 1,472 feet to the nearest solar panel. Adjoining land is primarily a mix of residential and agricultural uses, which is very typical of solar project sites.

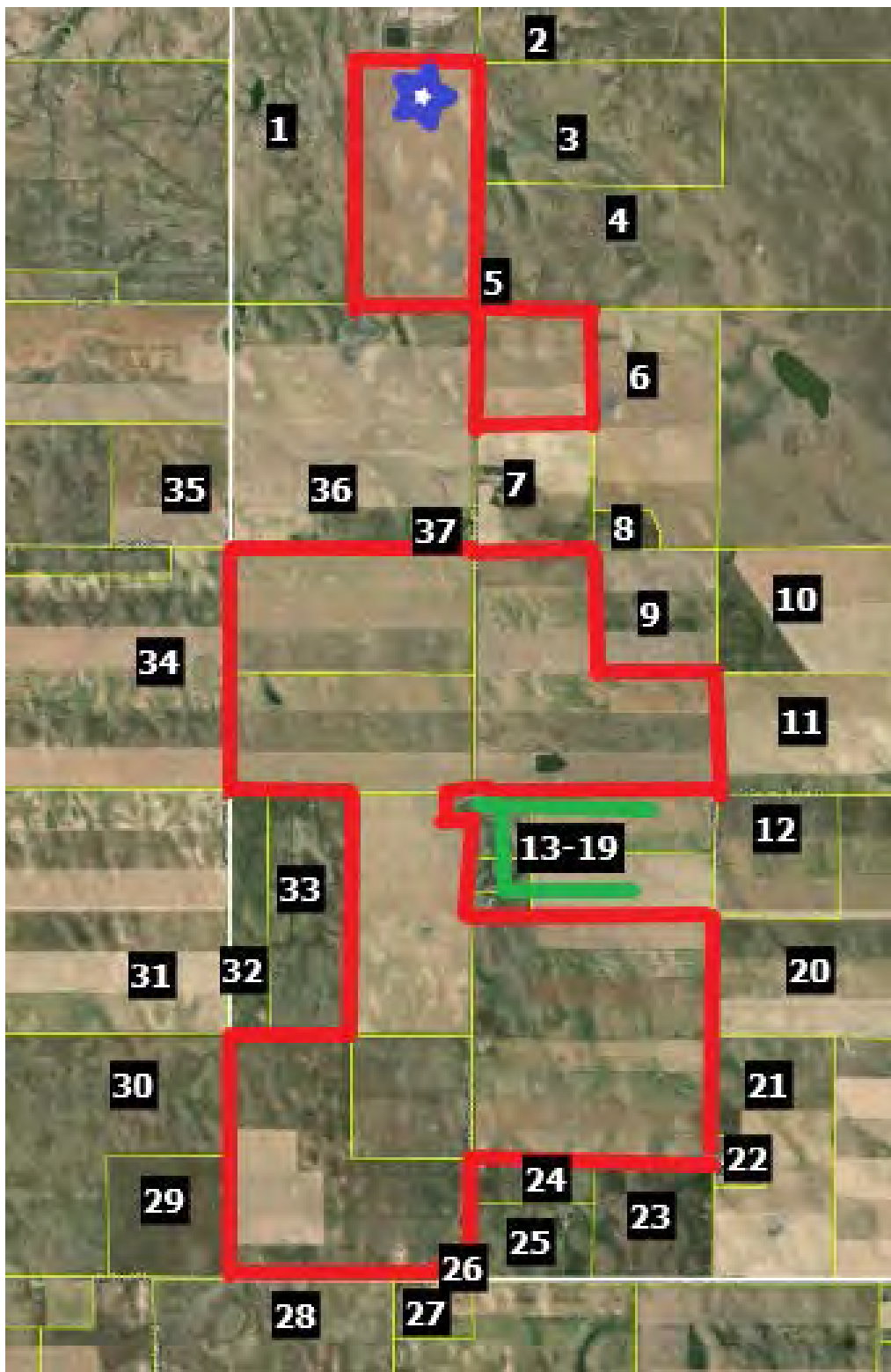
The breakdown of those uses by acreage and number of parcels is summarized below.

Adjoining Use Breakdown		
	Acreage	Parcels
Residential	0.43%	13.51%
Agricultural	70.18%	51.35%
Utility	6.62%	2.70%
Agri/Res	22.77%	32.43%
Total	100.00%	100.00%

Google Earth Map of Project



GIS/Tax Map of Adjoining Parcels



Blue star is approximate location of the BESS

Surrounding Uses

#	MAP ID	Owner	GIS Data		Adjoin	Adjoin	Distance (ft)
			Acres	Present Use	Acres	Parcels	Home/Panel
1	Unknown	Unknown	660.00	Utility	6.62%	2.70%	N/A
2	279305100063	Unknown	638.00	Agricultural	6.40%	2.70%	N/A
3	903000081000	Colorado	327.00	Agricultural	3.28%	2.70%	N/A
4	279308300066	Unknown	1616.00	Agricultural	16.21%	2.70%	N/A
5	279308300100	Anthony	6.69	Residential	0.07%	2.70%	N/A
6	279317100010	Unknown	299.00	Agricultural	3.00%	2.70%	N/A
7	279317300011	Margaret	157.00	Agri/Res	1.57%	2.70%	1,470
8	279317400012	Coley	25.54	Agricultural	0.26%	2.70%	N/A
9	279320100068	Steven	163.00	Agricultural	1.63%	2.70%	N/A
10	279321100017	Unknown	332.00	Agri/Res	3.33%	2.70%	2,925
11	279321300072	Steven	476.00	Agricultural	4.77%	2.70%	N/A
12	279328200024	Skinner	164.00	Agricultural	1.64%	2.70%	N/A
13	279329100073	Steven	119.00	Agricultural	1.19%	2.70%	N/A
14	279329200026	Kristen	10.32	Residential	0.10%	2.70%	1,240
15	279330100049	Chance	4.83	Residential	0.05%	2.70%	1,295
16	279329200027	Terry	30.09	Agri/Res	0.30%	2.70%	1,270
17	279329200028	Nathan	21.08	Agri/Res	0.21%	2.70%	1,160
18	279329200029	Timothy	14.82	Residential	0.15%	2.70%	1,180
19	279329100025	Griffith	124.00	Agricultural	1.24%	2.70%	N/A
20	279328100023	Skinner	474.00	Agricultural	4.75%	2.70%	N/A
21	279333200081	Griffith	290.00	Agricultural	2.91%	2.70%	N/A
22	279333200082	Shane	28.34	Agri/Res	0.28%	2.70%	1,075
23	279332400036	Douglas	156.00	Agricultural	1.56%	2.70%	N/A
24	279332300034	Douglas	59.23	Agri/Res	0.59%	2.70%	1,185
25	279332300035	Clay	99.67	Agri/Res	1.00%	2.70%	1,565
26	279331400083	Unknown	6.01	Residential	0.06%	2.70%	N/A
27	285305200010	Alan	50.35	Agri/Res	0.50%	2.70%	1,740
28	285306100126	Timothy	629.00	Agri/Res	6.31%	2.70%	1,260
29	736400182	Winterberg	160.00	Agricultural	1.60%	2.70%	N/A
30	736100085	Clevenger	482.00	Agricultural	4.83%	2.70%	N/A
31	723100180	Winterberg	640.00	Agricultural	6.42%	2.70%	N/A
32	279330200080	Larry	106.00	Agricultural	1.06%	2.70%	N/A
33	279330200079	Norka	219.00	Agri/Res	2.20%	2.70%	1,060
34	724100168	J and J	579.00	Agricultural	5.81%	2.70%	N/A
35	713400121	Winkelman	159.00	Agricultural	1.59%	2.70%	N/A
36	279318100091	Steven	621.00	Agri/Res	6.23%	2.70%	2,590
37	279307100006	Unknown	23.71	Agri/Res	0.24%	2.70%	1,060
Total			9970.680		100.00%	100.00%	1,472

Demographics Around Subject Property

I have pulled demographic data around a 1-mile, 3-mile and 5-mile radius from the middle of the project as shown on the following pages. The future growth anticipated for the area is minimal but stable.





Housing Profile

80828
80828, Limon, Colorado
Ring: 1 mile radius

Prepared by Esri
Latitude: 39.17752
Longitude: -103.70008

Population		Households	
2020 Total Population	5	2024 Median Household Income	\$100,000
2024 Total Population	4	2029 Median Household Income	\$100,000
2029 Total Population	4	2024-2029 Annual Rate	0.00%
2024-2029 Annual Rate	0.00%		

Housing Units by Occupancy Status and Tenure	Census 2020		2024		2029	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	3	100.0%	3	100.0%	3	100.0%
Occupied	3	100.0%	3	100.0%	3	100.0%
Owner	2	66.7%	2	66.7%	2	66.7%
Renter	1	33.3%	1	33.3%	1	33.3%
Vacant	0	0.0%	0	0.0%	0	0.0%

Owner Occupied Housing Units by Value	2024		2029	
	Number	Percent	Number	Percent
Total	2	100.0%	1	100.0%
<\$50,000	0	0.0%	0	0.0%
\$50,000-\$99,999	0	0.0%	0	0.0%
\$100,000-\$149,999	0	0.0%	0	0.0%
\$150,000-\$199,999	0	0.0%	0	0.0%
\$200,000-\$249,999	0	0.0%	0	0.0%
\$250,000-\$299,999	0	0.0%	0	0.0%
\$300,000-\$399,999	1	50.0%	0	0.0%
\$400,000-\$499,999	1	50.0%	1	100.0%
\$500,000-\$749,999	0	0.0%	0	0.0%
\$750,000-\$999,999	0	0.0%	0	0.0%
\$1,000,000-\$1,499,999	0	0.0%	0	0.0%
\$1,500,000-\$1,999,999	0	0.0%	0	0.0%
\$2,000,000+	0	0.0%	0	0.0%
Median Value	\$400,000		\$450,000	
Average Value	\$400,000		\$450,000	

Census 2020 Housing Units	Number	Percent
Total	3	100.0%
Housing Units In Urbanized Areas	0	0.0%
Rural Housing Units	3	100.0%

Census 2020 Owner Occupied Housing Units by Mortgage Status	Number	Percent
Total	2	100.0%
Owned with a Mortgage/Loan	1	50.0%
Owned Free and Clear	1	50.0%

Data Note: Persons of Hispanic Origin may be of any race.
Source: Esri forecasts for 2024 and 2029. U.S. Census Bureau 2020 decennial Census data.



Housing Profile

80828
80828, Limon, Colorado
Ring: 3 mile radius

Prepared by Esri
Latitude: 39.17752
Longitude: -103.70008

Population		Households	
2020 Total Population	1,001	2024 Median Household Income	\$75,000
2024 Total Population	883	2029 Median Household Income	\$79,735
2029 Total Population	888	2024-2029 Annual Rate	1.23%
2024-2029 Annual Rate	0.11%		

Housing Units by Occupancy Status and Tenure	Census 2020		2024		2029	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	41	100.0%	42	100.0%	42	100.0%
Occupied	39	95.1%	41	97.6%	42	100.0%
Owner	28	68.3%	29	69.0%	30	71.4%
Renter	11	26.8%	12	28.6%	12	28.6%
Vacant	6	14.6%	1	2.4%	1	2.4%

Owner Occupied Housing Units by Value	2024		2029	
	Number	Percent	Number	Percent
Total	29	100.0%	30	100.0%
<\$50,000	1	3.4%	1	3.3%
\$50,000-\$99,999	2	6.9%	1	3.3%
\$100,000-\$149,999	1	3.4%	1	3.3%
\$150,000-\$199,999	2	6.9%	2	6.7%
\$200,000-\$249,999	1	3.4%	1	3.3%
\$250,000-\$299,999	1	3.4%	1	3.3%
\$300,000-\$399,999	7	24.1%	6	20.0%
\$400,000-\$499,999	11	37.9%	12	40.0%
\$500,000-\$749,999	3	10.3%	4	13.3%
\$750,000-\$999,999	0	0.0%	1	3.3%
\$1,000,000-\$1,499,999	0	0.0%	0	0.0%
\$1,500,000-\$1,999,999	0	0.0%	0	0.0%
\$2,000,000+	0	0.0%	0	0.0%
Median Value		\$392,857		\$416,667
Average Value		\$359,483		\$398,333

Census 2020 Housing Units	Number	Percent
Total	41	100.0%
Housing Units In Urbanized Areas	0	0.0%
Rural Housing Units	41	100.0%

Census 2020 Owner Occupied Housing Units by Mortgage Status	Number	Percent
Total	28	100.0%
Owned with a Mortgage/Loan	14	50.0%
Owned Free and Clear	14	50.0%

Data Note: Persons of Hispanic Origin may be of any race.
Source: Esri forecasts for 2024 and 2029. U.S. Census Bureau 2020 decennial Census data.



Housing Profile

80828
80828, Limon, Colorado
Ring: 5 mile radius

Prepared by Esri
Latitude: 39.17752
Longitude: -103.70008

Population		Households	
2020 Total Population	1,113	2024 Median Household Income	\$75,694
2024 Total Population	985	2029 Median Household Income	\$82,940
2029 Total Population	992	2024-2029 Annual Rate	1.85%
2024-2029 Annual Rate	0.14%		

Housing Units by Occupancy Status and Tenure	Census 2020		2024		2029	
	Number	Percent	Number	Percent	Number	Percent
Total Housing Units	84	100.0%	86	100.0%	87	100.0%
Occupied	71	84.5%	78	90.7%	80	92.0%
Owner	51	60.7%	56	65.1%	59	67.8%
Renter	20	23.8%	22	25.6%	21	24.1%
Vacant	13	15.5%	8	9.3%	8	9.2%

Owner Occupied Housing Units by Value	2024		2029	
	Number	Percent	Number	Percent
Total	56	100.0%	58	100.0%
<\$50,000	3	5.4%	2	3.4%
\$50,000-\$99,999	3	5.4%	2	3.4%
\$100,000-\$149,999	1	1.8%	1	1.7%
\$150,000-\$199,999	4	7.1%	3	5.2%
\$200,000-\$249,999	1	1.8%	1	1.7%
\$250,000-\$299,999	2	3.6%	2	3.4%
\$300,000-\$399,999	12	21.4%	10	17.2%
\$400,000-\$499,999	20	35.7%	20	34.5%
\$500,000-\$749,999	9	16.1%	14	24.1%
\$750,000-\$999,999	1	1.8%	1	1.7%
\$1,000,000-\$1,499,999	0	0.0%	1	1.7%
\$1,500,000-\$1,999,999	0	0.0%	0	0.0%
\$2,000,000+	0	0.0%	1	1.7%
Median Value	\$410,000		\$440,000	
Average Value	\$385,714		\$469,828	

Census 2020 Housing Units	Number	Percent
Total	84	100.0%
Housing Units In Urbanized Areas	0	0.0%
Rural Housing Units	84	100.0%

Census 2020 Owner Occupied Housing Units by Mortgage Status	Number	Percent
Total	51	100.0%
Owned with a Mortgage/Loan	26	51.0%
Owned Free and Clear	25	49.0%

Data Note: Persons of Hispanic Origin may be of any race.
Source: Esri forecasts for 2024 and 2029. U.S. Census Bureau 2020 decennial Census data.

IV. Methodology and Discussion of Issues

Standards and Methodology

I conducted this analysis using the standards and practices established by the Appraisal Institute and that conform to the Uniform Standards of Professional Appraisal Practice. The analyses and methodologies contained in this report are accepted by all major lending institutions, and they are used in Colorado and across the country as the industry standard by certified appraisers conducting appraisals, market analyses, or impact studies and are considered adequate to form an opinion of the impact of a land use on neighboring properties. These standards and practices have also been accepted by the courts at the trial and appellate levels and by federal courts throughout the country as adequate to reach conclusions about the likely impact a use will have on adjoining or abutting properties.

The aforementioned standards compare property uses in the same market and generally within the same calendar year so that fluctuating markets do not alter study results. Although these standards do not require a linear study that examines adjoining property values before and after a new use (e.g. a solar project) is developed, some of these studies do in fact employ this type of analysis. Comparative studies, as used in this report, are considered an industry standard.

The type of analysis employed is a Matched Pair Analysis or Paired Sales Analysis. This methodology is outlined in **The Appraisal of Real Estate**, Twelfth Edition by the Appraisal Institute pages 438-439. It is further detailed in **Real Estate Damages**, Third Edition, pages 33-36 by Randall Bell PhD, MAI. Paired sales analysis is used to support adjustments in appraisal work for factors ranging from the impact of having a garage, golf course view, or additional bedrooms. It is an appropriate methodology for addressing the question of impact of an adjoining solar project. The paired sales analysis is based on the theory that when two properties are in all other respects equivalent, a single difference can be measured to indicate the difference in price between them. Dr. Bell describes it as comparing a test area to control areas. In the example provided by Dr. Bell he shows five paired sales in the test area compared to 1 to 3 sales in the control areas to determine a difference. I have used 3 sales in the control areas in my analysis for each sale developed into a matched pair.

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does not mean the use will be an external obsolescence, but a combination of these factors tends to be present when market data reflects that a use is an external obsolescence.

External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:

- 1) Traffic. Solar projects are not traffic generators.
- 2) Odor. Solar projects do not produce odor.
- 3) Noise. Solar projects generate no noise concerns during operation based on numerous noise studies and personal inspection of hundreds of solar project sites. They make even less noise at night.

- 4) Environmental. Solar projects do not produce toxic or hazardous waste. Grass is maintained underneath the panels so there is minimal impervious surface area.
- 5) Appearance/Viewshed. This is the one area that potentially applies to solar projects. However, solar projects are generally required to provide significant setbacks and landscaping buffers to address that concern. Furthermore, any consideration of appearance of viewshed impacts has to be considered in comparison with currently allowed uses on that site. For example, if the site can already be improved with say a feed lot, dairy, hog farm or other more industrial agricultural uses.
- 6) Other factors. I have observed and studied many solar projects and have never observed any characteristic about such facilities that prevents or impedes neighbors from fully using their homes or farms or businesses for the use intended.

Market Imperfection

Throughout this analysis, I have specifically considered the influence of market imperfection on data analysis. Market imperfection is the term that refers to the fact that unlike a can of soup at the supermarket or in your online shopping cart, real estate cannot be comparison shopped for the best price and purchased at the best price for that same identical product. Real estate products are always similar and never identical. Even two adjacent lots that are identical in almost every way, have a slight difference in location. Once those lots are developed with homes, the number of differences begin to multiply, whether it is size of the home, landscaping, layout, age of interior upfit, quality of interior upfit, quality of maintenance and so on.

Neoclassical economics indicates a perfectly competitive market as having the following: A large number of buyers and sellers (no one person dominates the market), no barriers or transaction costs, homogeneous product, and perfect information about the product and pricing. Real estate is clearly not homogeneous. The number of buyers and sellers for a particular product in a particular location is limited by geography, financing, and the limited time period within a property is listed. There are significant barriers that limit the liquidity in terms of time, costs and financing. Finally, information on real estate is often incomplete or partial – especially at the time that offers are made and prices set, which is prior to appraisals and home inspections. So real estate is very imperfect based on this definition and the impact of this is readily apparent in the real estate market.

What appear to be near-identical homes that are in the same subdivision will often sell with slight variations in price. When multiple appraisers approach the same property, there is often a slight variation among all of those conclusions of value, due to differences in comparables used or analysis of those comparables. This is common and happens all of the time. In fact, within each appraisal, after making adjustments to the comparables, the appraiser will typically have a range of values that are supported that often vary more than +/-5% from the median or average adjusted value.

Based on this understanding of market imperfection, it is important to note that very minor differences in value within an impact study do not necessarily indicate either a negative or positive impact. When the impacts measured fall within that +/-5%, I consider this to be within typical market variation/imperfection. Therefore it may be that there is a negative or positive impact identified if the impact is within that range, but given that it is indistinguishable from what amounts to the background noise or static within the real estate data, I do not consider indications of +/-5% to support a finding of a negative or positive impact.

Impacts greater than that range are, however, considered to be strong indications of impacts that fall outside of typical market imperfection. I have used this as a guideline while considering the impacts identified within this report.

Relative Solar Project Sizes

Solar projects have been increasing in size in recent years. Much of the data collected is from existing, older solar project of smaller size, but there are numerous examples of sales adjoining 75 to 80 MW facilities that show a similar trend to the smaller solar project. This is understandable given that the primary concern relative to a solar project is the appearance or view of the solar project, which is typically addressed through setbacks and landscaping buffers. The relevance of data from smaller solar projects to larger solar projects is due to the primary question being one of appearance. If the solar project is properly screened, then little of the solar project would be seen from adjoining property regardless of how many acres are involved.

Larger solar projects are often set up in sections where any adjoining owner would only be able to see a small section of the project even if there were no landscaping screen. Once a landscaping screen is in place, the primary view is effectively the same whether adjoining a 5 MW, 20 MW or 100 MW facility.

We have researched projects up to 1,000 MW and we have significant amounts of data adjoining a 617 MW project in Spotsylvania VA that was of great concern to neighbors when it was proposed, but home values have rapidly increased adjoining the solar project since it was installed and new home development adjoining that project has approached closer to the solar project including the most recent section that has solar panels on three sides where homes are being sold for over \$700,000



GoogleEarth image of Spotsylvania Solar, VA with new subdivision development ongoing

I have split out the data for the matched pairs adjoining larger solar project only to illustrate the similarities later in this report.

Steps Involved in the Paired Sale Analysis

The paired sales analysis employed in this report follows the following process:

1. Identify sales of property adjoining existing solar project.
2. Compare those sales to similar property that does not adjoin an existing solar project.
3. Confirmation of sales are noted in the analysis write-ups.
4. Distances from the homes to panels are included as a measure of the setbacks.
5. Topographic differences across the solar project themselves are likewise noted along with demographic data for comparing similar areas.

There are a number of Sale/Resale comparables included in the write ups, but most of the data shown is for sales of homes after a solar project has been announced (where noted) or after a solar project has been constructed.

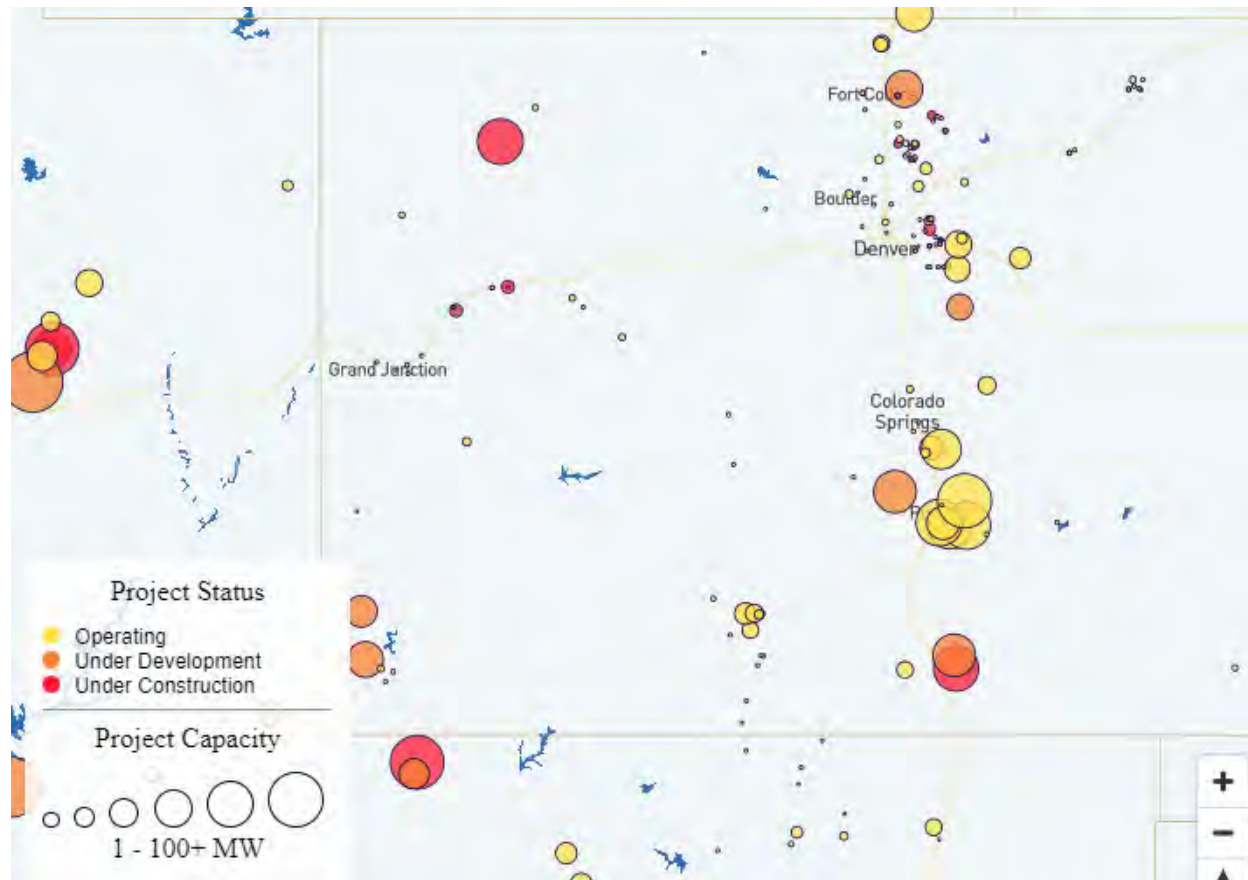
The Sale/Resale Analysis employed in this report follows the following process:

1. Identify sales of property adjoining existing solar project with a relatively recent prior sale before the solar project was announced/approved.
2. Adjust the prior sale for changes in the market over time based on the Federal Housing Finance Agency Home Price Index (FHFA HPI) for that specific area for the time between the two sales.
3. Comparison of the older sale adjusted for time to the more recent sale to see if it has appreciated typically for that market over that time period that includes the addition of the solar farm.
4. Confirmation of sales are noted in the analysis write-ups.
5. Distances from the homes to panels are included as a measure of the setbacks.

V. Summary of Solar Projects In and Around Colorado

I have researched the solar projects in Colorado. I identified the solar farms through the Solar Energy Industries Association (SEIA) Major Projects List and then excluded the roof mounted facilities. I focused on larger solar farms over 10 MW.

The map for projects in Colorado is shown below with only the circles in Yellow representing existing and operating solar farms. The Orange projects are still in the development stage, while the Red represent those in the construction stage. For this analysis on impacts on property value, I have focused on those that are in operation as the only reliable location for identifying the impacts of an existing solar farm.

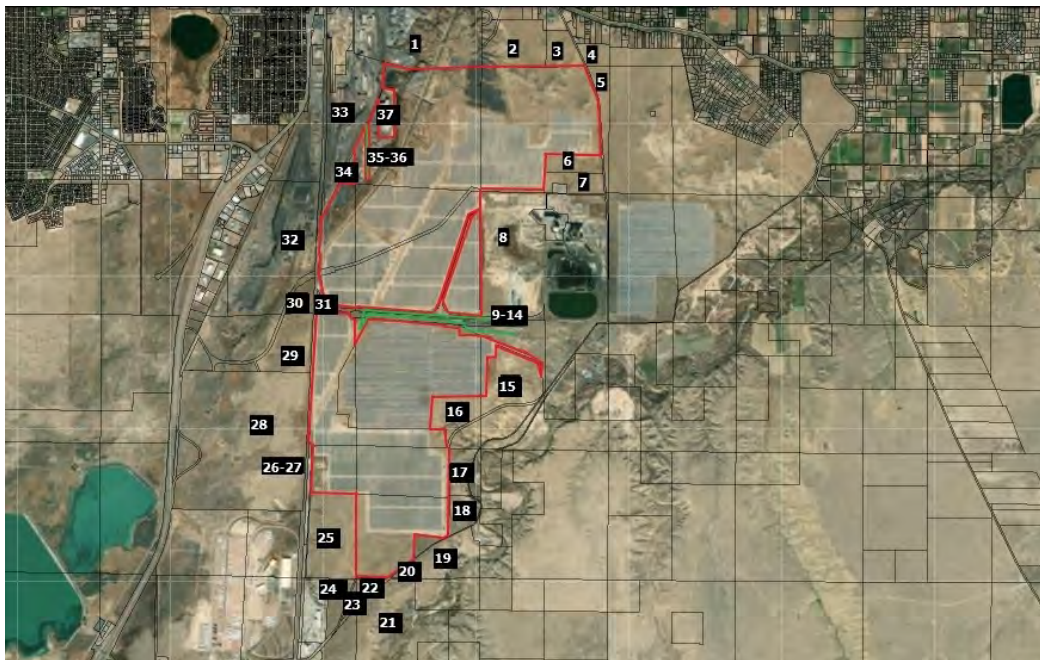


I was able to identify the following projects summarized on the next page. The following pages show those projects and the surrounding uses. I have also identified additional solar projects using AcreValue software that are included in the descriptions following the chart, but those projects are not on the chart.

I have included a number of smaller projects that I found while working on this but certainly not all. There were a great many 1 to 9 MW projects in Colorado that I did not include due to the smaller size of those solar projects.

Solar # Name	State	County	City	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre				
									Res	Agri	Agri/Res Com		
883 Palmer	CO	El Paso	Fountain	60	2267	2267	732	405	0%	98%	2%	0%	
884 Cogentrix	CO	Alamosa	Mosca	30	163.46	163.46	2,965	2,965	0%	87%	13%	0%	
888 Hooper	CO	Alamosa	Hooper	52	320	320	-	-	0%	100%	0%	0%	
889 Titan	CO	Arapahoe	Deer Trail	50	737.25	737.25	-	-	0%	94%	0%	6%	
890 San Luis Valley	CO	Alamosa	Hooper		308	308	822	620	5%	95%	0%	0%	
892 Boone Hill	CO	Pueblo	Boone	190	1780	1780	2,998	1,565	2%	94%	2%	3%	
912 Comanche	CO	Pueblo	Pueblo	120	518	518	1,568	765	0%	54%	15%	31%	
913 Big Horn 1	CO	Pueblo	Pueblo	240	2760	2760	915	915	0%	62%	2%	35%	
914 Grazing Yak	CO	El Paso	Calhan	35	271.93	271.93	835	660	0%	97%	3%	0%	
915 Rawhide	CO	Larimer	Bulger	22	150	150							
916 Pioneer Trail	CO	Adams	Bennet	110	611	611	4,411	410	3%	81%	16%	0%	
917 San Isabel	CO	Las Animas	Ludlow	30	250	250	4,029	1,450	5%	94%	2%	0%	
918 SR Jenkins	CO	Weld	Fort Lupton	13	141.89	141.89	453	305	2%	90%	8%	0%	
919 SR Platte	CO	Weld	Platteville	16	320	320	2,928	2,260	0%	91%	1%	8%	
920 Victory	CO	Adams	Bennet	12.8	68.32	68.32	2,045	2,045	0%	83%	16%	0%	
921 Bison	CO	Larimer	Bulger	30	1160	1160	1,328	395	0%	93%	7%	0%	
				16									
				Average	67.4	739.2	739.2	2002	1135	1%	87%	6%	6%
				Median	35.0	320.0	320.0	1568	765	0%	93%	2%	0%
				High	240.0	2760.0	2760.0	4411	2965	5%	100%	16%	35%
				Low	12.8	68.3	68.3	453	305	0%	54%	0%	0%

Big Horn Solar 1, Pueblo, Pueblo County, Colorado



This project was built in 2021 on a 2,760-acre parent tract for a 240 MW facility. This project adjoins an existing coal fired plant, which limits reliability of a paired sales analysis given the potential for impacts from the coal plant.

Rawhide/Bison Solar, Wellington, Larimer County, Colorado



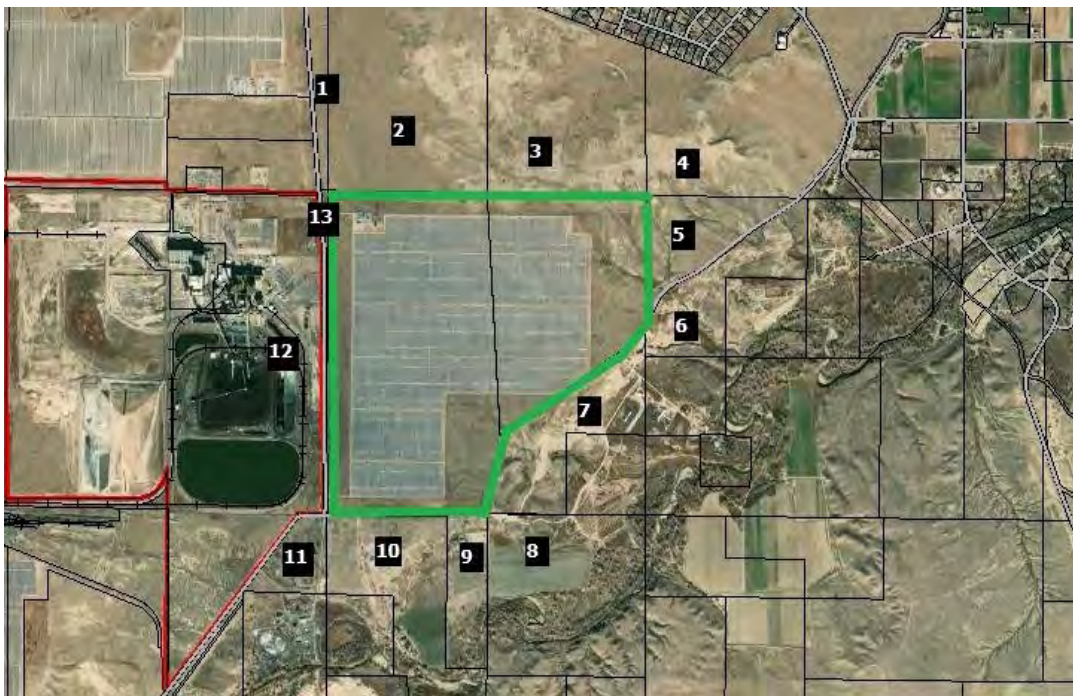
Bison Solar project was built in 2016 and located on a portion of a 1,160-acre tract for a 30 MW solar facility with the closest home being 395 from the closest solar panel. Rawhide solar was built in 2021 next to this facility for an additional 22 MW. These solar farms were built adjoining an existing coal power plant.

Solar of Alamosa, Mosca, Alamosa County, Colorado



This project was built in 2012 and located on 163.46 acres for a 30 MW with the closest home at 1,400 feet from the closest solar panel.

Comanche Solar, Pueblo, Pueblo County, Colorado



This project was built in 2017 and located on a portion of a 518-acre tract for a 120 MW solar facility with the closest home at 795 feet. This project adjoins an existing coal power plant and is just east of the Big Horn Solar 1 project.

Sun Mountain Solar, Pueblo, Pueblo County, Colorado

This project was built in 2022 at 2819 Doyle Road for a 200 MW solar facility with the closest home at 250 feet.

Thunder Wolf Solar, Avondale, Pueblo County, Colorado

This project was built in 2023 for a 100 MW solar facility with the closest home at 2,800 feet.

Grazing Yak Solar, Calhan, El Paso County, Colorado



This project was built in 2019 for a solar project on a 271.93-acre tract for a 35 MW facility. The closest home is 660 feet from the closest panel. This is within the area of the Golden West Power Partners, LLC windfarm that was built in 2015 for a 250 MW wind farm.

Neptune Energy Center Hybrid, Boone, Pueblo County, Colorado



This project was built in 2023 for a 125 MW solar facility with BESS with the closest home at 7,200 feet.

CSU Pueblo, Pueblo, Pueblo County, Colorado



This project was built in 2008 for a 1 MW solar facility with the closest home at 700 feet.

Hooper Solar, Hooper, Alamosa County, Colorado



This project was built in 2013 for a solar project on a 320-acre tract for a 52 MW facility. Parcel 6 includes a substation and open land.

Palmer Solar, Fountain, El Paso County, Colorado



This project was built in 2017 and located on a portion of a 2,267-acre tract for a 60 MW facility. The solar farm can be seen in the southeast corner of the tract and the western side of the tract. The closest adjoining home is 405 feet from the nearest panel.

Pioneer Solar, Bennet, Adams County, Colorado



This project was built in 2021 for an 80 MW facility. The closest adjoining home is 270 feet from the nearest solar panel.

Xcel Adams 2 Community Solar, Watkins, Adams County, Colorado



This project was to be completed in 2017 for a solar project on a 1.5 MW facility. The closest adjoining home is 300 feet away from the nearest panel.

San Isabel Solar, Ludlow, Las Animas County, Colorado



This project was built in 2016 and located on a portion of a 250-acre tract for a 30 MW facility. The closest adjoining home is 1,450 feet from the nearest solar panel.

San Luis Valley Solar Ranch, Mosca, Alamosa County, Colorado



This project was built in 2010 for a solar project on a 308.00-acre tract for a 35 MW facility. The closest single-family home is 620 feet away from the closest solar panel. The average distance is 822 feet.

SR Jenkins Fort Lupton Solar, Fort Lupton, Weld County, Colorado



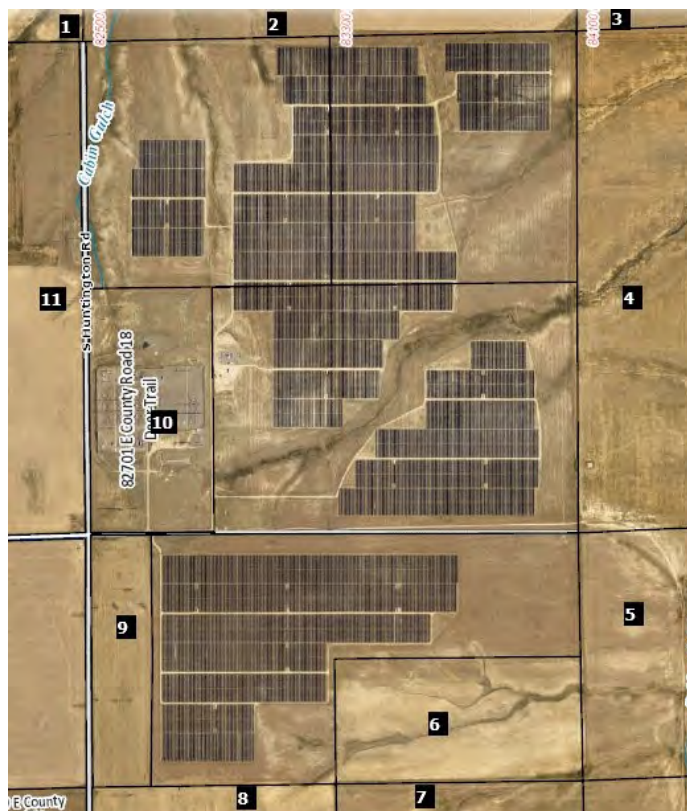
This project was built in 2016 for a solar project on a 141.89-acre tract for a 13 MW facility. The closest single-family home is 305 feet away from the closest solar panel. The average distance is 453 feet.

SR Platte Solar, Platteville, Weld County, Colorado



This project was built in 2018 for a solar project on a portion of a 320-acre tract for a 16 MW facility. The closest adjoining home is 2,260 feet away. The industrial use to the west is a tire storage yard.

Titan Solar, Deer Trail, Arapahoe County, Colorado



This project was built in 2018 for a solar project on a portion of a 737.25-acre tract for a 50 MW facility.

Victory Solar, Bennet, Adams County, Colorado



This project was built in 2017 for a solar project on a portion of a 68.32-acre tract for a 12.8 MW facility. The closest home is 2,045 feet away from the nearest panel.

Pike Solar Hybrid, Fountain, El Paso County, Colorado



This project was built in 2023 for a solar project for a 175 MW facility. This adjoins the Palmer facility, which can be seen to the south and west of this project.

Carson Solar I, Colorado Springs, El Paso County, Colorado



This project was built in 2007 for a solar project for a 1.5 MW facility. The closest home is 350 feet away from the nearest panel.

Pike Peak Solar Garden 1, Colorado Springs, El Paso County, Colorado



This project was built in 2015 for a solar project for a 2 MW facility.

AFA Solar, Colorado Springs, El Paso County, Colorado



This project was built in 2011 for a solar project for a 5.5 MW facility. This is in close proximity to the airport.

Quincy II Solar Garden, Aurora, Arapahoe County, Colorado



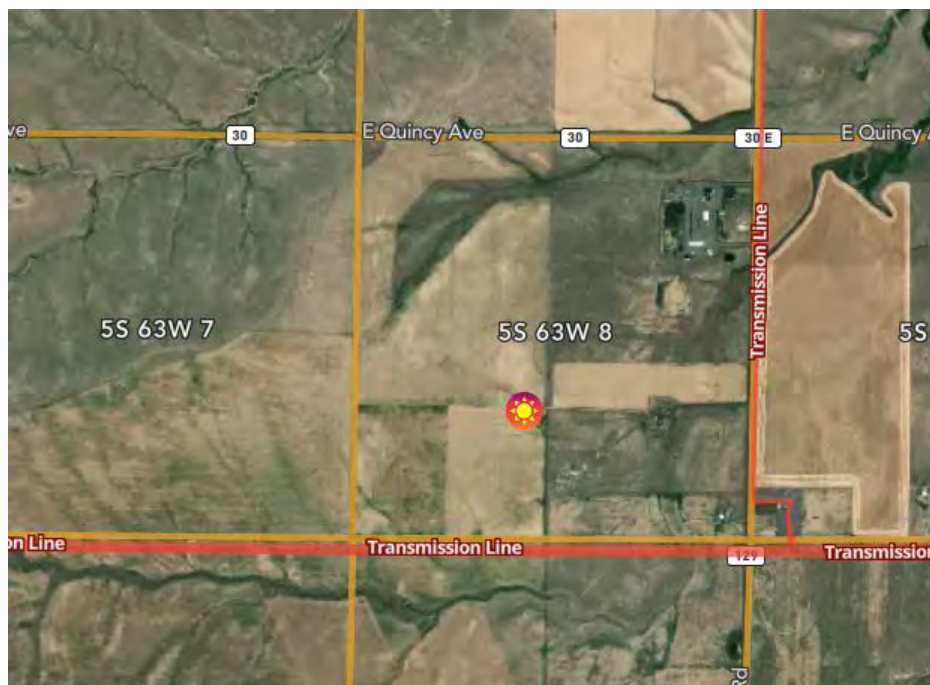
This project was built in 2018 for a solar project for a 1.5 MW facility.

Oak Leaf Solar, Denver et al, Arapahoe and Denver County, Colorado



Oak Leaf Solar has 18 solar farms scattered throughout Colorado with all being between 1 and 9 MW in size. Above is a map showing 3 of these projects.

Hunter Solar, Bennett, Arapahoe County, Colorado



This project was built in 2023 for a 75 MW facility.

Oak Leaf Solar, Denver et al, Arapahoe and Denver County, Colorado



Oak Leaf Solar has 18 solar farms scattered throughout Colorado with all being between 1 and 9 MW in size. Above is a map showing 3 of these projects.

Greater Sandhill I/SunE Alamosa, Mosca/Hooper, Alamosa County, Colorado

Greater Sandhill I was built in 2010 for a 9 MW project. SunE Alamosa was built in 2007 for a 1 MW project. Together this is effectively 10 MW. The closest single-family home is 660 feet away from the closest solar panel.

VI. Market Analysis – Colorado

I have researched hundreds of solar projects in numerous states to determine the impact of these facilities on the value of adjoining property. This research has primarily been in North Carolina, but I have also conducted market impact analyses in Colorado, Indiana, Ohio, Virginia, South Carolina, Tennessee, Texas, Oregon, Mississippi, Maryland, New York, California, Missouri, Florida, Montana, Georgia, Louisiana, and New Jersey.

Wherever I have looked at a solar project, I have derived a breakdown of the adjoining uses to show what adjoining uses are typical for solar projects and what uses would likely be considered consistent with a solar use similar to the breakdown that I have shown for the subject property on the previous page. A summary showing the results of compiling that data over hundreds of solar projects is shown later in the Scope of Research section of this report.

I also consider whether the properties adjoining a solar project in one location have characteristics similar to the properties abutting or adjoining the proposed site so that I can make an assessment of market impact on each proposed site. Notably, in most cases solar projects are placed in areas very similar to the site in question, which is surrounded by low density residential and agricultural uses. In my over 1,000 studies, I have found a striking repetition of that same typical adjoining use mix in over 90% of the solar projects I have looked at. Matched pair results in multiple states are strikingly similar, and all indicate that solar projects – which generate very little traffic, and do not generate noise, dust or have other harmful effects – do not negatively impact the value of adjoining or abutting properties.

On the following pages I have also considered matched pair data specific to some other nearby states where there is additional supplemental data. I focused on areas where landscaping is more challenging to establish and larger setbacks similar to what is suggested for this project is common to adjust for that factor.

A. *Colorado Data*

The following pages detail the sales data identified.

1. Grazing Yak Solar, Calhan, El Paso County, Colorado



This project is a 35 MW facility located on a 271.93-acre tract that was built in 2019. There are windmills nearby.

I have considered the sale of Parcel 7 on September 14, 2021 for \$280,000 (30945 Washington Road, Calhan, CO) shown above which includes an older dwelling that is only 660 feet from the nearest solar panel. This property includes 46.09 acres, and the dwelling was in poor condition. I spoke with Jody Heffner, the broker who sold this tract who indicated that the solar farm had no impact on the purchase price and the nearby windfarm likewise had no impact. The home was difficult to compare to other homes in the area given the small size and condition. She did note that it sold reasonably quick for the area in less than 3 months and sold for \$280,000, which was above the asking price of \$275,000.

Properties needing significant repairs are difficult to use in a paired sales analysis without good estimates of the needed repairs. I have therefore not attempted a paired sales analysis, but I have relied on the broker's comments related to the solar farm having no impact on the sales price.



30945 Washington Road, Calhan, CO



Image from the broker's listing showing the solar and windfarm

2. San Luis Valley Solar, Hooper, Alamosa County, Colorado

This project was built in 2010 and located on a portion of a 308-acre tract for a 35 MW with the closest home at 620 feet from the closest solar panel.

I considered the sale of Parcel 10 (8120 N County Road 106, Mosca, CO) that is 620 feet from the closest solar panel. This property sold on October 12, 2022 for \$225,000 after being on the market for 71 days. I spoke with Bill Werner with Werner Realty who was marketing this 1,546 s.f. home on 4.61 acres. He indicated that the adjoining solar farm had no impact on the sales price or the marketing time on the project. He indicated that there were few homes in the area to choose from, which also makes it difficult to do a paired sales analysis.

I have relied on the brokers comments in this analysis and

3. SR Jenkins Fort Lupton, Fort Lupton, Weld County, Colorado



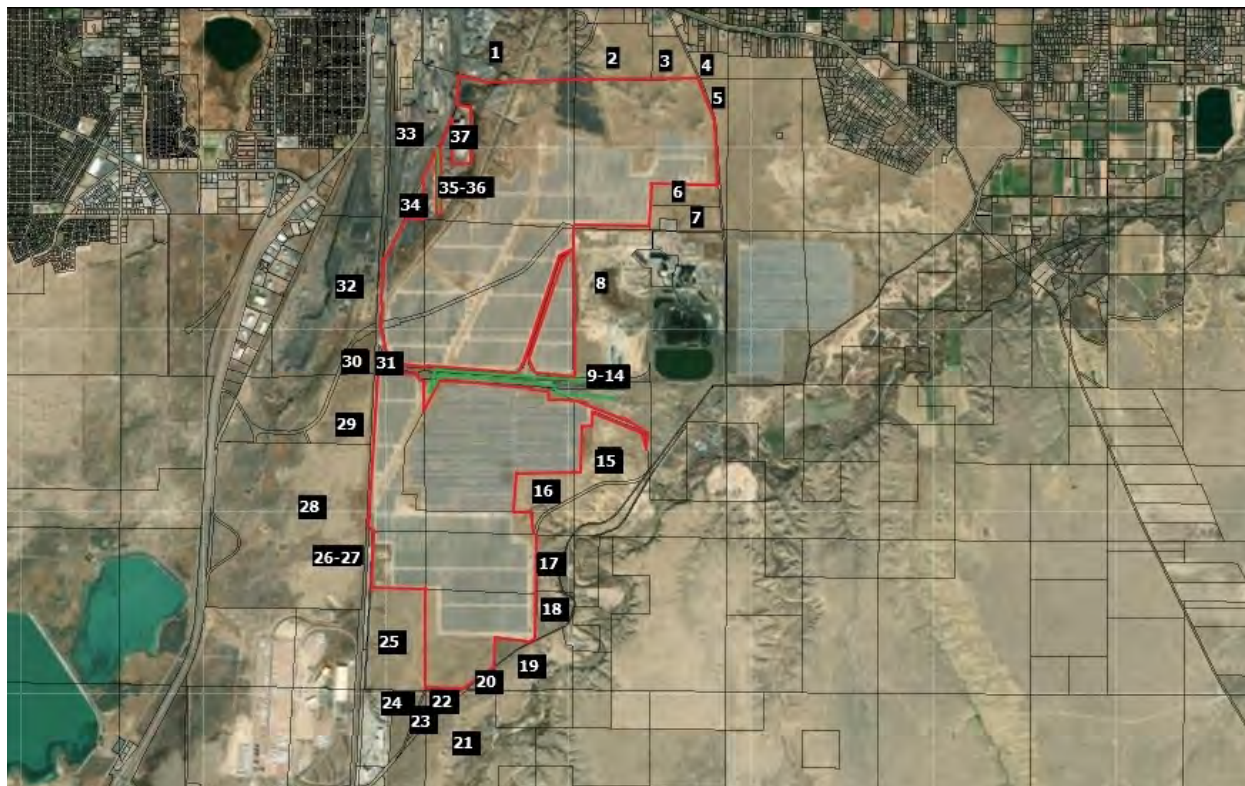
This project is a 13 MW facility located on a 141.89-acre tract that was built in 2016.

I have considered the January 4, 2021 sale of Parcel 5 for \$835,000 (16230 Highway 52, Fort Lupton, CO) as shown above. The home on this parcel is 525 feet from the closest solar panel. This was a 29.47-acre tract with a single-family home, detached small office building, and various agricultural buildings. The collection of buildings and acreage is very unique, which limits the reliability of any paired sales analysis on this transfer.

I spoke with Lisa Moen, the buyer's realtor, who indicated that the solar farm was not a concern at all for the buyer. She further noted that the buyer was her Mother-In-Law and that the solar farm has been a quiet neighbor and is still not a concern for the buyer. Ms. Moen further indicated that it would be difficult to compare this sale to other properties in the area due to the unique assemblage of buildings on the property.

So, I have not completed a paired sales analysis on this sale either, but I have considered the comments by the broker in this analysis.

4. Big Horn Solar 1, Pueblo, Pueblo County, Colorado



This project was built in 2021 on a 2,760-acre parent tract for a 240 MW facility. This project adjoins an existing coal fired plant, which limits reliability of a paired sales analysis given the potential for impacts from the coal plant.

I identified a sale at 1800 La Salle Road that sold in November 2021 for \$195,000 for a 1,668 s.f. home with 3 BR, 2 BA, built in 1987 on 1 acre. This home is 3,750 feet from the nearest panel. This home included a large metal garage and shop. While a paired sales analysis has limitations due to the coal plant, a Sale/Resale analysis accounts for the coal plant in both transactions. The most recent sale of this same property prior to construction of the solar farm was on December 13, 1996 for \$95,000. This was 25 years and I will not rely heavily on this indication, but based on the FHFA HPI, this was expected to appreciate to \$276,000. The problem with such a long time period is that this home appears to have some commercial uses and fronts on a busy road. This Sale/Resale suggests a significant negative impact, but is over a 25-year time span that makes it difficult to rely on.

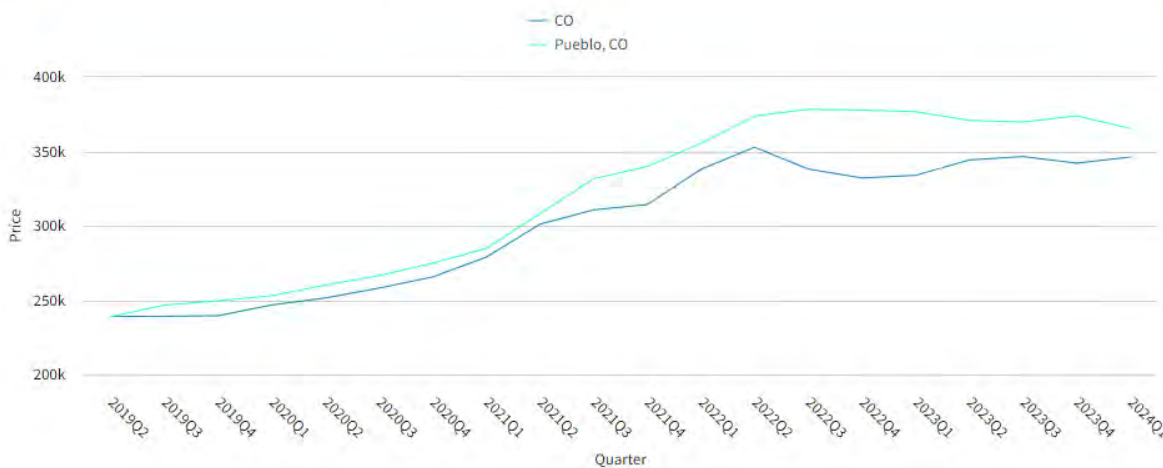
I identified a sale at 1791 Rosevale Court that sold on January 12, 2023 for \$485,000 for a 1,619 s.f. ranch with 3 -car garage, 3 BR, 2 BA built in 1994 on 2.82 acres. This home is 3,660 feet from the nearest panel. The most recent sale prior to the solar farm was from August 1994 for \$124,200. The Sale/Resale analysis on this is an even longer span than the 1800 La Salle Road as it covers 29 years. The expected increase of this home sale over that time span is \$482,445, which is almost exactly the sales price that happened in 2023. This strongly supports a finding of no impact on property value. This home is on a cul-de-sac and less impacted by other uses than the La Salle property, but due to the long time period, I still will not rely heavily on this indicator.

I consider the next data point that covers just a 5-year time span to be much more reliable than the two noted above.

I identified a sale at 1871 South Road that sold on February 9, 2024 for \$419,900 for a 2,296 s.f. ranch built in 1924 on 1.01 acres with a 2-car garage. This home was 4,100 feet from the nearest panel. While a paired sales analysis has limitations due to the coal plant, a Sale/Resale analysis accounts for the coal plant in both transactions. The most recent sale of this same property prior to construction of the solar farm was on May 31, 2019 for \$239,000.

Adjusting that upward for growth in the market over time using the FHFA Home Price Index for this area, supports an expected growth of the value of that property from \$239,000 to \$365,389 over that time period. The difference suggests a substantial increase in value in this property over the expected increase after the solar farm. However, this is misleading as the listing photos show this home as being in very nice condition and while the listing does not specify this, it appears to have had a significant amount of updating. I reached out to Chris Pasternak with Pasternak Properties (719-717-0321) who indicated that the property had been upgraded, but that the trees surrounding the property just set it apart from other homes in the area. Even so, the significant increase in value supports an indication of no impact on property value as any updating to this property would have also been done in proximity to the solar farm and cosmetic upgrades would not likely explain a difference greater than \$50,000. If the upgrades explained as much as \$60,000 in upgrades, it still would support a finding of no impact on property value at this distance.

Estimated Value for MSA: \$365,389	Estimated Value for State: \$346,187	MSA Percentage Change: 52.88%
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5. Bison/Rawhide Solar, Wellington, Larimer County, Colorado



Bison Solar project was built in 2016 and located on a portion of a 1,160-acre tract for a 30 MW solar facility with the closest home being 395 from the closest solar panel. Rawhide solar was built in 2021 next to this facility for an additional 22 MW. These solar farms were built adjoining an existing coal power plant.

A manufactured home located at 17342 N County Road 9 sold on May 17, 2024 for \$609,000 with 1,944 s.f., 4 BR, 2 BA, built in 2000 on 36.25 acres and a detached shop and storage shed. The closest point on the home to the nearest panel is 1,660 feet. I reached out to Andria Porter Stashak with Keller Williams-DTC about this sale.

I have compared this to similar manufactured homes with acreage in the area as shown below.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	17342 N 9	36.25	5/17/2024	\$609,000	2000	1,944	\$313.27	4/2	Drive	Manuf	Shop
Not	16820 N 7	35.00	3/8/2023	\$515,000	2000	2,077	\$247.95	3/2	Det 3	Manuf	
Not	18890 Rawhide	40.00	9/29/2023	\$635,000	1996	2,066	\$307.36	4/2	Det 4	Manuf	Barn/Coral
Not	13912 N 7	35.00	8/30/2024	\$617,320	1984	2,248	\$274.61	4/2	Det 2	Manuf	Shop
Avg											
Solar	Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
Adjoins	17342 N 9							\$609,000			1660
Not	16820 N 7	\$31,537	\$0	-\$9,893				\$536,643	12%		
Not	18890 Rawhide	\$20,602	\$12,700	-\$11,249		-\$20,000	-\$15,000	\$622,053	-2%		
Not	13912 N 7	-\$9,104	\$49,386	-\$25,044		-\$10,000		\$622,558	-2%		
3%											

The least adjusted comparable actually shows a positive impact on property value. The blend of the three supports a finding of no impact on property value.

6. Solar of Alamosa, Mosca, Alamosa County, Colorado



This project was built in 2012 and located on 163.46 acres for a 30 MW with the closest home at 1,400 feet from the closest solar panel.

I identified a home sale at 4947 Lane 1 that sold on May 2, 2023 for \$149,000 for a ranch home with 1,725 s.f., 3 BR, 2 BA, built in 1914 on 4.5 acres along with a Quonset hut workshop. This home is 1800 feet from the nearest panel.

Given the age and size, this was not a good sale for paired sales analysis, but I was able to find one good similar nearby sale, which was 8106 Road 111 N, Mosca on August 19, 2022 for \$160,000 for a 1,359 s.f. home, 3 BR, 1 BA built in 1919 on 11.97 acres with a one car garage.

I have not attempted to make adjustments but I consider the differences in size, age and land to be cancelling factors. Essentially, the smaller home is on more acres. Still, the condition and other features are too different to say anything other than these are similar. I have not relied on this sale further in the analysis.

7. Pioneer Solar, Bennett, Adams County, Colorado



This project was built in 2021 for an 80 MW facility. The closest adjoining home is 270 feet from the nearest solar panel.

8. Greater Sandhill I/SunE Alamosa, Mosca, Alamosa County, Colorado



Greater Sandhill I was built in 2010 for a 9 MW project. SunE Alamosa was built in 2007 for a 1 MW project. Together this is effectively 10 MW. The closest single-family home is 660 feet away from the closest solar panel.

The home located at 8092 County Road 109 sold on April 14, 2022 for \$600,000 for this two-story, 6,278 s.f., 5 BR, 4.5 BA with 3-car garage, guest house (included in square footage), with two 40x60 shops grain bins leased to local farmers, and two wells, built in 1990 on 5.33 acres. This home is 660 feet from the nearest solar panel.

This is a very unique property that is problematic for a paired sales analysis. I reached out to Alissa Schultz, the listing agent with Arrowhead Realty (720-545-3570) for comments. She indicated that this was a “unicorn” and there was not much to compare to it, but that the solar project “did not have any effect on the sale whatsoever.”

Conclusion

The solar farm sales identified in Colorado include 8 solar farms where I found sales activity for analysis. From those, I relied on 6 sales of properties adjoining solar farms as being reliable indicators as discussed in the prior pages. Most of these include the broker comments, but also include paired sales analysis as well as Sale/Resale analysis.

I have considered this as an indication that adjoining solar farms are not having an impact in Colorado for homes as close as 525 feet, which is the closest adjoining home identified in those sales. These solar projects are not using landscaping screens that I have identified.

I have included below a summary of the demographic data around those three solar farms in Colorado from which that sales data was extracted and compared that to the proposed solar farm.

The predominate adjoining uses are residential and agricultural. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Colorado as well as the proposed subject property.

Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property. The population density is very low in all of the cases considered and much lower than many of the solar farms identified later in this report.

I note that while the demographic data indicates zeroes for some of the income and housing within 1 mile, I have analyzed home sales closer than that, which is just a discrepancy in the census data and not indicative of no home market in those areas.

Matched Pair Summary			Adj. Uses By Acreage							1 mile Radius (2020 Data)			
Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	
1	Grazing Yak	Calhan	CO	272	35.00	N/A	0%	97%	3%	0%	40	\$78,104	\$623,214
2	San Luis Villy	Hooper	CO	308	35.00	N/A	5%	95%	0%	0%	11	\$59,164	\$450,000
3	SR Jenkins	Ft. Lupton	CO	142	13.00	N/A	2%	90%	8%	0%	129	\$114,961	\$802,703
4	Big Horn 1	Pueblo	CO	2,760	240.00	N/A	0%	44%	2%	54%	20	\$75,000	\$400,000
5	Bison/Raw	Wellington	CO	1,160	52.00	N/A	0%	93%	7%	0%	0	\$0	\$0
6	Alamosa	Mosca	CO	163	30.00	N/A	0%	87%	13%	0%	7	\$0	\$0
7	Pioneer	Bennett	CO	611	110.00	N/A	3%	81%	16%	0%	67	\$82,329	\$497,991
8	Sandhill/SunE	Mosca	CO	N/A	10.00	N/A	N/A	N/A	N/A	N/A	4	\$0	\$0
Average				774	65.63	N/A	1%	84%	7%	8%	35	\$51,195	\$346,739
Median				308	35.00	N/A	0%	90%	7%	0%	16	\$67,082	\$425,000
High				2,760	240.00	N/A	5%	97%	16%	54%	129	\$114,961	\$802,703
Low				142	10.00	N/A	0%	44%	0%	0%	0	\$0	\$0

On the next page I show the breakdown of the sales data that was considered reliable for the analysis.

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	County	City	State	Area	MW	Approx			Adj. Sale		
							Distance	Tax ID/Address	Date	Sale Price	Price	% Diff
1	Grazing Yak	El Paso	Calhan	CO	Rural	35	660	30945 Washington	Sep-21	\$280,000		
								30945 Washington	Sep-21	\$280,000	\$280,000	0%
2	San Luis VI	Alamosa	Hooper	CO	Rural	35	620	8120 N County	Oct-22	\$225,000		
								8120 N County	Oct-22	\$225,000	\$225,000	0%
3	SR Jenkins	Weld	Ft Lupton	CO	Rural	13	525	16230 Hwy 52	Jan-21	\$835,000		
								16230 Hwy 52	Jan-21	\$835,000	\$835,000	0%
4	Bison/Raw	Larimer	Wellington	CO	Rural	30	1660	17342 N County 9	May-24	\$609,000		
								13912 N 7	Aug-24	\$617,320	\$622,558	-2%
5	Pioneer	Adams	Bennett	CO	Rural	80	830	101 Fox	Nov-22	\$464,000		
								45831 Silverdrop	Dec-22	\$452,500	\$452,500	2%
6	Grt Sandhill	Alamosa	Mosca	CO	Rural	10	660	8092 CR 109	Apr-22	\$600,000		
								8092 CR 109	Apr-22	\$600,000	\$600,000	0%

	Avg.	Indicated
	MW	Impact
Average	33.83	0%
Median	32.50	0%
High	80.00	2%
Low	10.00	-2%

B. Arizona and Texas Data

1. Picture Rocks, Tucson, Pima County



This solar farm was built in 2012 on a 302.80-acre tract but utilizing only 182 acres. This is a 20 MW facility with residential subdivision to the south and larger lot homes to the north, south and west.

I have identified two adjoining homes in the Tierra Linda subdivision that have sold recently in close proximity to the solar farm. They are written up as matched pairs below.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
14	Adjoins	12986 W Moss V	0.97	6/4/2020	\$393,900	2020	2,241	\$175.77	4/3	3-Gar	Adobe	Crtyrd
	Not	13071 W Smr Ppy	0.85	2/26/2020	\$389,409	2019	2,231	\$174.54	4/3	3-Gar	Adobe	Crtyrd
	Not	13352 W Tgr Aloe	1.07	3/31/2020	\$389,300	2015	2,555	\$152.37	4/3	3-Gar	Adobe	Crtyrd
	Not		0.97	8/2/2020	\$410,000	2018	2,688	\$152.53	4/2	3-Gar	Adobe	Crtyrd

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							\$393,900			1100
\$3,249		\$1,947	\$1,396				\$396,001	-1%		
\$2,132		\$9,733	-\$38,275				\$362,890	8%		
-\$2,038		\$4,100	-\$54,545	\$10,000			\$367,517	7%		
									5%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
15	Adjoins	12986 W Moss V	1.00	6/27/2019	\$350,000	2006	2,660	\$131.58	4/3.5	3-Gar	Adobe	Crtyrd
	Not	12994 W Btr Bsh	0.92	5/24/2018	\$302,000	2007	2,410	\$125.31	4/3	3-Gar	Adobe	Crtyrd
	Not	12884W Zbra Aloe	0.83	1/29/2020	\$336,500	2007	2,452	\$137.23	4/3	3-Gar	Adobe	Crtyrd
	Not	12829W Smr Ppy	0.88	6/2/2020	\$317,500	2006	2,452	\$129.49	4/3	3-Gar	Adobe	Crtyrd

Adjoining Sales Adjusted									Avg		
Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance	
							\$350,000			970	
\$10,154		-\$1,510	\$25,062	\$5,000			\$340,707	3%			
-\$6,125		-\$1,683	\$22,836	\$5,000			\$356,528	-2%			
-\$9,124		\$0	\$21,546	\$5,000			\$334,923	4%			
									2%		

I have also looked at a recent sale of a manufactured home in close proximity to this solar farm for an additional matched pair. This home included a 2,200 s.f. detached metal building used as a garage/workshop that I adjusted based on Marshall Swift Cost Estimating Service values for a depreciated metal building.

Adjoining Residential Sales After Solar Farm Approved												
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
9	Adjoins	12705 W Emigh	2.26	1/27/2019	\$255,000	1994	2,640	\$96.59	3/2	Det 4Car	Ranch	Horse
	Not	12715 W Emigh	2.50	5/30/2019	\$210,000	2005	2,485	\$84.51	4/2	Crprt	Ranch	Horse
	Not	12020 W Camper	1.81	9/15/2019	\$200,000	2006	2,304	\$86.81	4/2	Open	Ranch	Horse
	Not	12445 W Emigh	5.00	10/2/2018	\$210,000	1999	2,400	\$87.50	4/2	Open	Ranch	Horse

Adjoining Sales Adjusted									Avg		
Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance	
							\$255,000			990	
-\$2,177		-\$11,550	\$10,479		\$46,000	\$0	\$252,752	1%			
-\$3,893		-\$12,000	\$23,333		\$50,000	\$0	\$257,440	-1%			
\$2,071	-\$25,000	-\$5,250	\$16,800		\$50,000	\$0	\$248,621	3%			
									1%		

These matched pairs range from 970 to 1,100 feet from the closest solar panel and show no negative impact due to proximity to the solar farm. The average measured impacts range from +1% to +5%, which is within a typical variation for real estate and supports a conclusion of no impact.

Adjoining Residential Sales After Solar Farm Approved

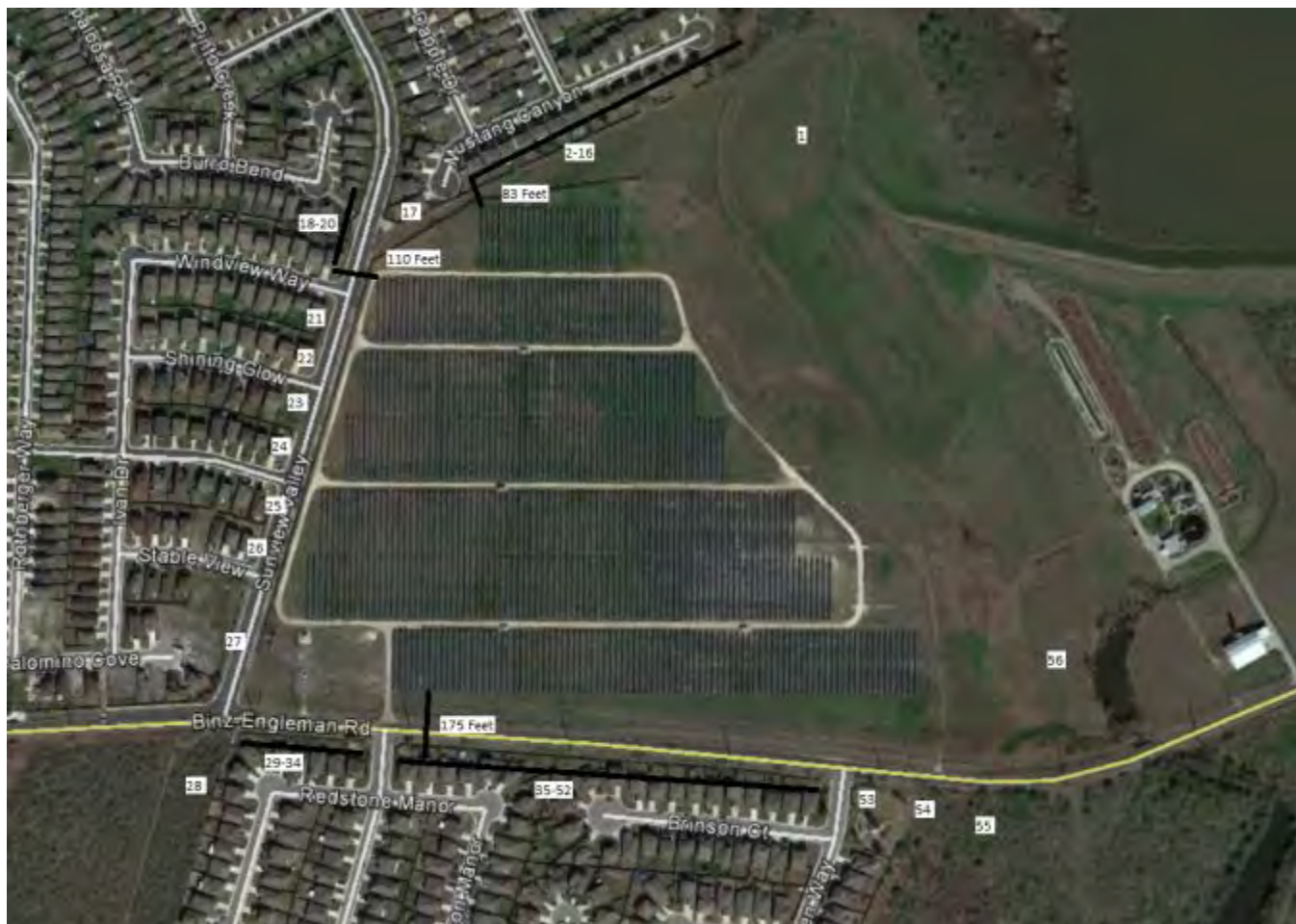
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
	Adjoins	14441 W Stallion	4.40	12/21/2017	\$150,000	2002	2,280	\$65.79	3/3.5	Open	Manuf
	Not	9620 N Rng Bck	4.14	3/24/2019	\$139,000	2003	2,026	\$68.61	4/3	Open	Manuf
	Not	5537 N Whitetail	1.38	9/26/2018	\$148,000	2006	2,037	\$72.66	4/3	Open	Manuf
	Not	5494 N Puma	1.38	12/6/2017	\$138,900	2000	2,044	\$67.95	4/3	Open	Manuf

Adjoining Sales Adjusted

Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
							\$150,000			1467
-\$5,365		-\$695	\$10,456				\$143,396	4%		
-\$3,480	\$5,000	-\$2,960	\$10,593				\$157,154	-5%		
\$176	\$5,000	\$1,389	\$9,622				\$155,087	-3%		
									-1%	

These matched pairs range from 1,467 to 1,697 feet from the closest solar panel and show no negative impact due to proximity to the solar farm. The average measured impacts range from -1% to 0%, which is within a typical variation for real estate and supports a conclusion of no impact.

4. Matched Pair – Alamo 2 Solar, Converse, Bexar County, TX



This project is located at 8203 Binz-Engleman Road, Converse, Texas, on 98.37 acres with a 4.4 MW output. This project is located with small lot residential development on to the north west and south. There appears to be minimal landscaping along this project. The closest home to the north is 83 feet from the solar panels, while the homes to the west are 110 feet and the homes to the south are 175 feet away from the solar panels.

This solar farm strongly shows an acceptance of nearby residential development in close proximity to solar farms as this solar farm has minimal landscaping, close proximity, small adjoining lot sizes, and the development of homes on three sides of the solar farm.

Adjoining Use Breakdown

Acreage	Parcels
Residential	94.64%
Agricultural	5.36%
Total	100.00%

I have considered home sales in the three adjoining subdivisions to look at matched pair data. There are sales and resales of homes in Glenloch and Mustang Valley subdivisions to the south and west of this solar farm.

I have considered multiple matched pairs from these subdivisions to show typical appreciation and no impact on property value both before and after the solar farm was constructed in 2013. I have

looked at a number of home sales and resales in the larger subdivisions, but I have focused on those directly adjoining/facing the solar farm in the examples shown below. These are sales and resales of the homes adjoining the solar farm both before and after the solar farm project in 2013.

The comparables shown below are compared to an earlier sale prior to the solar farm announcement or construction followed by a second sale after the solar farm. The first two have solar farms in the Backyard (B), while the other has the solar farm in the Side yard (S). All of these sales show appreciation that falls within the typical annual appreciation for homes in this area over this time period.

7703 Redstone Mnr (B)			7807 Redstone Mnr (B)			7734 Sundew Mist (S)		
	<u>Date</u>	<u>Price</u>		<u>Date</u>	<u>Price</u>		<u>Date</u>	<u>Price</u>
Sale	10/3/2012	\$149,980	Sale	5/11/2012	\$136,266	Sale	5/23/2012	\$117,140
Sale	3/24/2016	\$166,000	Sale	8/11/2014	\$147,000	Sale	11/18/2014	\$134,000
	<u>Time - YRS</u>	<u>% Incr.</u>		<u>Time - YRS</u>	<u>% Incr.</u>		<u>Time - YRS</u>	<u>% Incr.</u>
	3.47	10.7%		2.25	7.9%		2.49	14.4%
	<u>Per Year</u>	<u>3.1%</u>		<u>Per Year</u>	<u>3.5%</u>		<u>Per Year</u>	<u>5.8%</u>
Years	3.5	<u>10.8%</u>	Years	2.5	<u>8.7%</u>	Years	2	<u>11.6%</u>

I therefore conclude that this set of matched pairs shows no impact on property value and that homes in the area are showing typical appreciation consistent with other homes not in the vicinity of solar farms.

I have also considered a number of sales and resales of adjoining homes to look at appreciation adjoining the solar farm as compared to sales and resales of nearby homes not adjoining the solar farm. This provides for a good side-by-side comparison of appreciation in these areas.

The nearby sales not adjoining the solar farm show an average annual increase of 3.85% per year increase with a range of 0.47% up to 8.34% and a median increase of 3.64%. The homes adjoining the solar farm show an average annual increase of 4.48% per year with a range of 2.77% to 5.45% and a median of 5.21%. The increases adjoining the solar farm are actually higher than those nearby and strongly support the assertion of no impact on property value.

Adjoining Residential Sales After Solar Farm Built											
Solar	Address	Land (AC)	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	% Inc.	%/Yr
Near	7926 Binson Court	0.13	7/20/2017	\$184,000	2007	2,268	\$81.13	4 bed	2 Gar		
Near	7926 Binson Court	0.13	11/27/2019	\$199,999	2007	2,268	\$88.18	4 bed	2 Gar	8.70%	3.69%
Near	7819 Caballo Canyon	0.10	9/7/2017	\$135,500	2008	1,547	\$87.59	3 bed	2 Gar		
Near	7819 Caballo Canyon	0.10	3/24/2020	\$157,500	2008	1,547	\$101.81	3 bed	2 Gar	16.24%	6.38%
Near	4730 Dapple Drive	0.13	10/7/2017	\$154,900	2007	1,656	\$93.54	3 bed	2 Gar		
Near	4730 Dapple Drive	0.13	6/11/2020	\$170,000	2007	1,656	\$102.66	3 bed	2 Gar	9.75%	3.64%
Near	4006 Giverny Ct	0.14	2/5/2018	\$169,900	2007	1,656	\$102.60	3 bed	2 Gar		
Near	4006 Giverny Ct	0.14	1/17/2020	\$180,000	2007	1,656	\$108.70	3 bed	2 Gar	5.94%	3.05%
Near	4003 Maston Manor	0.17	6/21/2018	\$165,000	2010	1,544	\$106.87	3 bed	2 Gar		
Near	4003 Maston Manor	0.17	2/14/2020	\$173,400	2010	1,544	\$112.31	3 bed	2 Gar	5.09%	3.08%
Near	4803 Pinto Creek	0.10	5/31/2018	\$150,000	2007	1,547	\$96.96	3 bed	2 Gar		
Near	4803 Pinto Creek	0.10	8/5/2020	\$162,000	2007	1,547	\$104.72	3 bed	2 Gar	8.00%	3.66%
Near	4303 Safe Harbor	0.09	1/14/2016	\$162,574	2015	1,601	\$101.55	3 bed	2 Gar		
Near	4303 Safe Harbor	0.09	3/26/2019	\$165,000	2015	1,601	\$103.06	3 bed	2 Gar	1.49%	0.47%
Near	4307 Safe Harbor	0.10	10/14/2016	\$200,475	2016	2,488	\$80.58	4 bed	2 Gar		
Near	4307 Safe Harbor	0.10	2/27/2020	\$211,000	2016	2,488	\$84.81	4 bed	2 Gar	5.25%	1.56%
Near	4338 Safe Harbor	0.09	5/5/2016	\$149,900	2014	1,353	\$110.79	3 bed	2 Gar		
Near	4338 Safe Harbor	0.09	7/10/2018	\$159,000	2014	1,353	\$117.52	3 bed	2 Gar	6.07%	2.78%
Near	7822 Sterling Manor	0.14	2/24/2017	\$160,000	2011	1,898	\$84.30	3 bed	2 Gar		
Near	7822 Sterling Manor	0.14	12/30/2019	\$198,000	2011	1,898	\$104.32	3 bed	2 Gar	23.75%	8.34%
Near	7938 Sterling Manor	0.15	7/29/2016	\$157,000	2008	1,795	\$87.47	3 bed	2 Gar		
Near	7938 Sterling Manor	0.15	7/31/2020	\$192,500	2008	1,795	\$107.24	3 bed	2 Gar	22.61%	5.64%
Adjacent	7731 Shining Glow	0.14	11/28/2018	\$174,999	2006	2,658	\$65.84	3 bed	2 Gar		
Adjacent	7731 Shining Glow	0.14	10/9/2020	\$192,000	2006	2,658	\$72.23	3 bed	2 Gar	9.71%	5.21%
Rear View	7935 Brinson Court	0.15	8/15/2017	\$187,500	2007	2,328	\$80.54	4 bed	2 Gar		
Rear View	7935 Brinson Court	0.15	1/10/2020	\$200,000	2007	2,328	\$85.91	4 bed	2 Gar	6.67%	2.77%
View	7815 Mustang Canyon	0.12	9/3/2016	\$149,900	2009	2,267	\$66.12	3 bed	2 Gar		
View	7815 Mustang Canyon	0.12	11/21/2018	\$168,000	2009	2,267	\$74.11	3 bed	2 Gar	12.07%	5.45%

I have also looked at these three recent sales that are either adjacent, have a rear view or a view of the solar farm. I have developed matched pairs for these homes as shown below.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
Nearby	7731 Shining Gl	0.14	10/9/2020	\$192,000	2006	2,658	\$72.23	3/2.5	2Gar	2-story
Not	7906 Caballo	0.13	10/2/2019	\$201,000	2012	2,959	\$67.93	4/2.5	2Gar	2-story
Not	4519 Rothberger	0.10	5/31/2020	\$186,000	2006	2,773	\$67.08	3/2.5	2Gar	2-story
Not	4530 Rothberger	0.10	9/8/2019	\$167,500	2006	2,652	\$63.16	3/2.5	2Gar	2-story

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
Adjoins	7734 Sundew M	0.14	6/12/2018	\$158,400	2011	1,354	\$116.99	3/2	2Gar	Ranch
Not	4338 Safe Hrbr	0.10	7/25/2019	\$156,000	2014	1,413	\$110.40	3/2	2Gar	Br Rnch
Not	7730 Palomino	0.10	4/23/2018	\$154,000	2014	1,315	\$117.11	3/2	2Gar	Br Rnch
Not	7907 Horse H	0.13	1/7/2018	\$160,000	2012	1,420	\$112.68	3/2	2Gar	Br Rnch

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Other	Total	% Diff	Avg % Diff	Distance
7734 Sundew M						\$158,400			150
4338 Safe Hrbr	-\$5,364	-\$2,340	-\$5,211			\$143,085	10%		
7730 Palomino	\$649	-\$2,310	\$3,654			\$155,993	2%		
7907 Horse H	\$2,103	-\$800	-\$5,949			\$155,354	2%	4%	

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	7731 Stable V	0.11	9/9/2019	\$189,900	2012	1,782	\$106.57	3/2.5	2Gar	2-Brick	
Not	5026 Sunview	0.11	3/12/2020	\$180,900	2013	1,782	\$101.52	3/2.5	2Gar	2-Brick	Greenbelt
Not	5082 Mustang V	0.10	2/26/2020	\$184,000	2013	2,013	\$91.41	3/2.5	2Gar	2-Brick	
Not	4003 Matson M	0.17	2/17/2020	\$173,400	2010	1,544	\$112.31	3/2	2Gar	2-Brick	

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Other	Total	% Diff	Avg % Diff	Distance
7731 Stable V						\$189,900			150
5026 Sunview	-\$2,820	-\$905	\$0			\$177,175	7%		
5082 Mustang V	-\$2,636	-\$920	-\$16,892			\$163,552	14%		
4003 Matson M	-\$2,353	\$1,734	\$21,383			\$194,164	-2%	6%	

The 6 matched pairs above provide a good indication of no impact for these homes adjoining the solar farm with all three having homes between 150 and 230 feet from the nearest solar panel.

The 6 matched pairs show a range of average impacts from -3% to +6% with an average of +3% and a median of +3%.

The best indicator for each matched pair is not the average, but the one requiring the least adjustment. In order this would be +5%, -2%, +1%, -1%, +2%, and +7% with an average of +2% and a median of +2%.

These data points strongly show no impact on property value due to the adjacency to the solar farm.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	275 Anna Hobbs	0.38	2/14/2020	\$160,000	1983	1,636	\$97.80	3/2	Open	Br Rnch	
Not	112 Ashley	1.11	11/21/2019	\$195,900	2006	1,526	\$128.37	4/2	2Gar	Br Rnch	
Not	825 W 3rd	0.38	8/8/2018	\$136,000	1978	1,300	\$104.62	3/2	2Gar	Br Rnch	Updated
Not	813 W 3rd	0.38	6/19/2020	\$158,250	1977	1,450	\$109.14	3/2	2Gar	Br Rnch	Updated

Adjoining Sales Adjusted

	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
275 Anna Hobbs							\$160,000			960
112 Ashley	\$1,403	-\$22,529	\$11,297		-\$15,000		\$171,072	-7%		
825 W 3rd	\$6,361	\$3,400	\$28,121		-\$15,000		\$158,881	1%		
813 W 3rd	-\$1,680	\$4,748	\$16,240		-\$15,000		\$162,557	-2%		
									-3%	

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	205 Anna Hobbs	0.38	10/22/2018	\$145,000	1981	1,636	\$88.63	4/2	Gar	Br Rnch	
Not	112 Ashley	1.11	11/21/2019	\$195,900	2006	1,526	\$128.37	4/2	2Gar	Br Rnch	
Not	825 W 3rd	0.38	8/8/2018	\$136,000	1978	1,300	\$104.62	3/2	2Gar	Br Rnch	Updated
Not	813 W 3rd	0.38	6/19/2020	\$158,250	1977	1,450	\$109.14	3/2	2Gar	Br Rnch	Updated

Adjoining Sales Adjusted

	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
205 Anna Hobbs							\$145,000			960
112 Ashley	-\$6,521	-\$24,488	\$11,297		-\$5,000		\$171,189	-18%		
825 W 3rd	\$860	\$2,040	\$28,121		-\$5,000		\$162,020	-12%		
813 W 3rd	-\$8,081	\$3,165	\$16,240		-\$5,000		\$164,573	-13%		
									-14%	

I did not adjust the comparable sales above for the updates noted in the comparables as it is difficult to ascertain the extent of updates or the condition of the improvements at that point. I do note that the property was updated and put back on the market with a pending sale that I have shown in the adjustment below. After the updates this property is selling for \$25,000 higher than the sale from just two years ago. I consider the pending sale to be more indicative of values in the area.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	205 Anna Hobbs	0.38	Pending	\$170,000	1981	1,636	\$103.91	4/2	Gar	Br Rnch	Updated
Not	112 Ashley	1.11	11/21/2019	\$195,900	2006	1,526	\$128.37	4/2	2Gar	Br Rnch	
Not	825 W 3rd	0.38	8/8/2018	\$136,000	1978	1,300	\$104.62	3/2	2Gar	Br Rnch	Updated
Not	813 W 3rd	0.38	6/19/2020	\$158,250	1977	1,450	\$109.14	3/2	2Gar	Br Rnch	Updated

Adjoining Sales Adjusted

	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
205 Anna Hobbs							\$170,000			960
112 Ashley	\$5,745	-\$24,488	\$11,297		-\$5,000		\$183,454	-8%		
825 W 3rd	\$9,375	\$2,040	\$28,121		-\$5,000		\$170,536	0%		
813 W 3rd	\$1,827	\$3,165	\$16,240		-\$5,000		\$174,482	-3%		
									-4%	

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	189 Anna Hobbs	0.38	6/9/2018	\$140,000	1976	1,276	\$109.72	3/2	2Gar	Br Rnch	
Not	112 Ashley	1.11	11/21/2019	\$195,900	2006	1,526	\$128.37	4/2	2Gar	Br Rnch	
Not	825 W 3rd	0.38	8/8/2018	\$136,000	1978	1,300	\$104.62	3/2	2Gar	Br Rnch	Updated
Not	813 W 3rd	0.38	6/19/2020	\$158,250	1977	1,450	\$109.14	3/2	2Gar	Br Rnch	Updated

Adjoining Sales Adjusted

	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
189 Anna Hobbs							\$140,000			960
112 Ashley	-\$8,749	-\$29,385	-\$25,675				\$132,091	6%		
825 W 3rd	-\$688	-\$1,360	-\$2,009				\$131,944	6%		
813 W 3rd	-\$9,882	-\$791	-\$15,192				\$132,385	5%		
									6%	

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	421 Hudson	5.00	3/12/2018	\$326,531	2007	1,906	\$171.32	4/2	2Gar	Br Rnch	Wrkshp
Not	743 Liberty Hill	10.00	5/6/2018	\$317,000	1951	2,366	\$133.98	4/2.5	Det2Gr	1.5 Story	Barn
Not	12608 Chapel	9.90	4/2/2018	\$350,000	2009	1,888	\$185.38	3/2	DetGar	Ranch	Barn/Apt
Not	130 Ralynn	1.00	4/23/2018	\$339,600	2018	2,294	\$148.04	4/3	3Gar	Br Rnch	

Adjoining Sales Adjusted

	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
421 Hudson								\$326,531			470
743 Liberty Hill	-\$1,469	-\$25,000	\$88,760	-\$49,305	-\$5,000			\$324,986	0%		
12608 Chapel	-\$619	-\$25,000	-\$3,500	\$2,669				\$323,550	1%		
130 Ralynn	-\$1,202	\$15,000	-\$18,678	-\$45,951	-\$10,000		\$10,000	\$288,769	12%		
										4%	

The 5 matched pairs above provide a good indication of no impact for these homes adjoining the solar farm. This excludes the first sale of 205 Anna Hobbs prior to the update as discussed above as the difference indicated in the first sale is clearly attributable to the lack of updating that home.

The 5 matched pairs show a range of average impacts from -4% to +11% with an average of +2.8% and a median of +4%.

The best indicator for each matched pair is not the average, but the one requiring the least adjustment. In order this would be +1%, -2%, -3%, +6%, and +1% with an average of +0.60% and a median of +1%.

These data points strongly show no impact on property value due to the adjacency to the solar farm.

6. Matched Pair – Somerset Solar, Somerset, Bexar County, TX



This 10.6 MW project has older and newer homes adjoining to the south and east as shown above.

I have considered a sale of two lots along W. Dixon Road that back up to the solar farm. These two lots total 2.4 acres and sold on August 13, 2020 for \$75,000, or \$37,500 per 1.2-acre lot.

A similar lot sold at 3750 FM 3175, Lytle, Texas on March 8, 2018 for \$37,500 for a 1-acre lot. Another similar 1-acre lot at 40 Fair Oak, Somerset sold on March 31, 2019 for \$40,000. I also looked at the July 8, 2018 sale of a 3.05-acre lot for \$70,000. This size is very similar and likely could support two home sites similar to the W. Dixon Road land sale.

These lot sales show no negative impact due to the adjacent solar farm.

Conclusion

The solar farm matched pairs shown above have similar characteristics to each other in terms of population, but with several outliers showing solar farms in far more urban areas. The median income for the population within 1 mile of a solar farm among this subset of matched pairs is \$62,868 with a median housing unit value of \$189,088. Most of the comparables are under \$300,000 in the home price, though I have matched pairs in other states over \$1,000,000 in price adjoining large solar farms. The predominate adjoining uses are residential and agricultural. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Arizona and adjoining states as well as the proposed subject property.

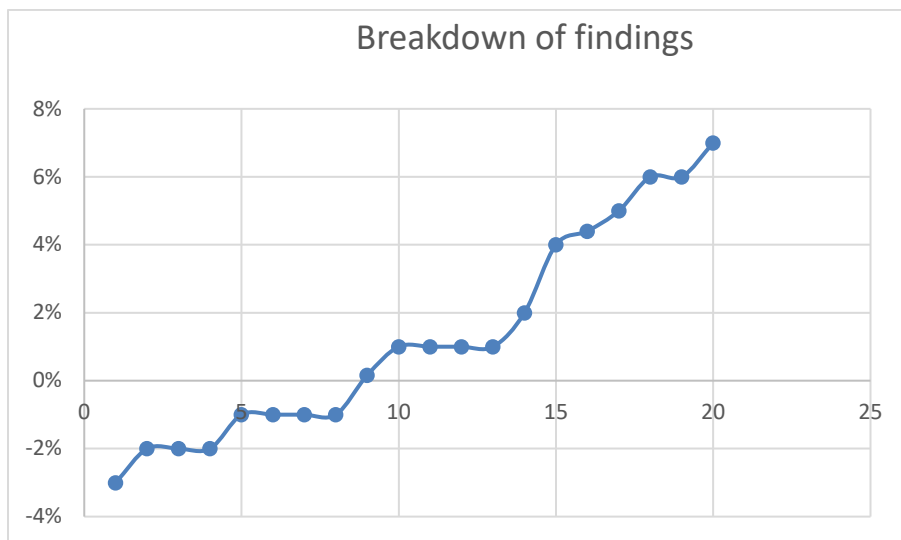
Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property. I note that the Alamo II site is less similar to the others due to the higher population around it. Somerset is also more populous and less comparable, but the other three are more similar with Picture Rocks and Avra Valley being the most similar – including the lack of any landscaping screen.

Matched Pair Summary				Adj. Uses By Acreage							1 mile Radius (2010-2020 Data)			
Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	Veg. Buffer	
1	Alamo II	Converse	TX	98	4.40	30	95%	5%	0%	0%	9,257	\$62,363	\$138,617	None to Lt
2	Picture Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	\$81,081	\$280,172	None
3	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	\$80,997	\$292,308	None
4	Eddy II	Eddy	TX	93	10.00	N/A	15%	25%	58%	2%	551	\$59,627	\$139,088	Light
5	Somerset	Somerset	TX	128	10.60	N/A	5%	95%	0%	0%	1,293	\$41,574	\$135,490	Light
Average				149	14.00	30	25%	61%	13%	0%	2,258	\$65,128	\$197,135	
Median				128	10.60	30	6%	88%	3%	0%	551	\$62,363	\$139,088	
High				246	25.00	30	95%	95%	58%	2%	9,257	\$81,081	\$292,308	
Low				93	4.40	30	3%	5%	0%	0%	85	\$41,574	\$135,490	

The population within a 3 Mile of the proposed site is 883 people with a median income of \$75,000 and average house value of \$359,483.

The population within a 5 Mile of the proposed site is 985 with a median income of \$75,694 and average house value of \$385,714.

On the following page is a summary of the 19 matched pairs for all of the solar farms noted above. They show a pattern of results from -3% to +7% with an average of +1% and a median finding of +1%. As can be seen in the chart of those results below, most of the data points are between 0% and +4%. This variability is common with real estate and consistent with market “static.” I therefore conclude that these results strongly support an indication of no impact on property value due to the adjacent solar farm.



Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	MW	Approx Distance	Tax ID/Address	Date	Sale Price	Adj. Sale Price	Veg. % Diff	Buffer
1	Alamo II	San Antonio	TX	4.4	360	7703 Redstone Mnr	Mar-16	\$166,000			Light
						7703 Redstone Mnr	Oct-12	\$149,980	\$165,728	0%	
2	Alamo II	San Antonio	TX	4.4	170	7807 Redstone Mnr	Aug-14	\$147,000			Light
						7807 Redstone Mnr	May-12	\$136,266	\$145,464	1%	
3	Alamo II	San Antonio	TX	4.4	150	7734 Sundew Mist	Nov-14	\$134,000			Light
						7734 Sundew Mist	May-12	\$117,140	\$125,928	6%	
4	Picture Rocks	Tucson	AZ	20	1100	12980 W Moss V	Jun-20	\$393,900			None
						13071 W Smr Poppy	Feb-20	\$389,409	\$396,001	-1%	
5	Picture Rocks	Tucson	AZ	20	970	12986 W Moss V	Jun-19	\$350,000			None
						12884 W Zebra Aloe	Jan-20	\$336,500	\$356,528	-2%	
6	Picture Rocks	Tucson	AZ	20	990	12705 W Emigh	Jan-19	\$255,000			None
						12020 W Camper	Sep-19	\$200,000	\$257,440	-1%	
7	Avra Valley	Tucson	AZ	25	1697	9415 N Ghost Ranch	Oct-18	\$131,000			None
						7175 N Nelson Quich	Mar-19	\$136,000	\$131,913	-1%	
8	Avra Valley	Tucson	AZ	25	1467	14441 W Stallion	Dec-17	\$150,000			None
						9620 N Rng Bck	Mar-19	\$139,000	\$143,396	4%	
9	Alamo 2	Converse	TX	4.4	210	7731 Shining Gl	Oct-20	\$192,000			Light
						4519 Rothberger	May-20	\$186,000	\$181,882	5%	
10	Alamo 2	Converse	TX	4.4	230	7935 Brinson	Jan-20	\$200,000			Light
						2926 Brinson	Nov-19	\$199,999	\$204,973	-2%	
11	Alamo 2	Converse	TX	4.4	200	7815 Mustang	Nov-18	\$168,000			Light
						4431 Safe Harbor	Sep-19	\$165,000	\$165,601	1%	
12	Alamo 2	Converse	TX	4.4	170	7807 Mustang	Nov-17	\$162,000			Light
						5046 Mustang	Apr-18	\$160,000	\$163,316	-1%	
13	Alamo 2	Converse	TX	4.4	150	7734 Sundew Mist	Jun-18	\$158,400			Light
						7730 Palomino	Apr-18	\$154,000	\$155,993	2%	
14	Alamo 2	Converse	TX	4.4	150	7731 Stable View	Sep-19	\$189,900			Light
						5026 Sunview	Mar-20	\$180,900	\$177,175	7%	
15	Eddy II	Eddy	TX	10	960	341 Anna Hobbs	Nov-17	\$108,000			Light
						712 W 3rd	Aug-18	\$114,900	\$106,725	1%	
16	Eddy II	Eddy	TX	10	960	275 Anna Hobbs	Feb-20	\$160,000			Light
						813 W 3rd	Jun-20	\$158,250	\$162,557	-2%	
17	Eddy II	Eddy	TX	10	960	205 Anna Hobbs	Pending	\$170,000			Light
						813 W 3rd	Jun-20	\$158,250	\$174,482	-3%	
18	Eddy II	Eddy	TX	10	960	189 Anna Hobbs	Jun-18	\$140,000			Light
						825 W 3rd	Aug-18	\$136,000	\$131,944	6%	
19	Eddy II	Eddy	TX	10	470	421 Hudson	Mar-18	\$326,531			Light
						12608 Chapel	Apr-18	\$350,000	\$323,550	1%	

MW	Avg. Distance		Indicated Impact
10.51	649	Average	1%
10.00	470	Median	1%
25.00	1,697	High	7%
4.40	150	Low	-3%

I have further broken down these results based on the MWs, Landscaping, and distance from panel to show the following range of findings for these different categories.

This breakdown shows no homes between 100-200 homes and only light to no landscaped buffers around these solar farms. The median adjusted impact at all distances remains 0% to +1% supporting a finding of no impact on value.

MW Range			
4.4 to 10			
Landscaping	Light	Light	Light
Distance	100-200	201-500	500+
Average	3%	1%	N/A
Median	1%	0%	N/A
High	7%	5%	0%
Low	-1%	-2%	0%
10.1 to 30			
Landscaping	Light	Light	Light
Distance	100-200	201-500	500+
Average	0%	1%	0%
Median	1%	1%	0%
High	4%	7%	2%
Low	-9%	-4%	-1%

C. Summary of National Data on Solar project

I have worked in 28 states related to solar project and I have been tracking matched pairs in most of those states. On the following pages I provide a brief summary of those findings showing 46 solar projects over 5 MW studied with each one providing matched pair data supporting the findings of this report.

The solar project summary is shown below with a summary of the matched pair data shown on the following page.

Matched Pair Summary						Adj. Uses By Acreage					1 mile Radius (2020 Data)		
Name	City	State	Acres	MW	Topo	Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit
1	AM Best	Goldsboro	NC	38	5.00	2	38%	0%	23%	39%	1,523	\$37,358	\$148,375
2	Mulberry	Selmer	TN	160	5.00	60	13%	73%	10%	3%	467	\$40,936	\$171,746
3	Leonard	Hughesville	MD	47	5.00	20	18%	75%	0%	6%	525	\$106,550	\$350,000
4	Gastonia SC	Gastonia	NC	35	5.00	48	33%	0%	23%	44%	4,689	\$35,057	\$126,562
5	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731
6	Tracy	Bayley	NC	50	5.00	10	29%	0%	71%	0%	312	\$43,940	\$99,219
7	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667
8	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306
9	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	\$70,158	\$187,037
10	Dominion	Indianapolis	IN	134	8.60	20	3%	97%	0%	0%	3,774	\$61,115	\$167,515
11	Mariposa	Stanley	NC	36	5.00	96	48%	0%	52%	0%	1,716	\$36,439	\$137,884
12	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453
13	Flemington	Flemington	NJ	120	9.36	N/A	13%	50%	28%	8%	3,477	\$105,714	\$444,696
14	Frenchtown	Frenchtown	NJ	139	7.90	N/A	37%	35%	29%	0%	457	\$111,562	\$515,399
15	McGraw	East Windsor	NJ	95	14.00	N/A	27%	44%	0%	29%	7,684	\$78,417	\$362,428
16	Tinton Falls	Tinton Falls	NJ	100	16.00	N/A	98%	0%	0%	2%	4,667	\$92,346	\$343,492
17	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	\$76,155	\$269,922
18	Candace	Princeton	NC	54	5.00	22	76%	24%	0%	0%	448	\$51,002	\$107,171
19	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076
20	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435
21	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347
22	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	\$47,208	\$187,214
23	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	\$46,839	\$110,361
24	Sunfish	Willow Spring	NC	50	6.40	30	35%	35%	30%	0%	1,515	\$63,652	\$253,138
25	Picture Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	\$81,081	\$280,172
26	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	\$80,997	\$292,308
27	Sappony	Spry Cnk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208
28	Camden Dam	Camden	NC	50	5.00	0	17%	72%	11%	0%	403	\$84,426	\$230,288
29	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	\$50,355	\$231,408
30	Champion	Pelion	SC	100	10.00	N/A	4%	70%	8%	18%	1,336	\$46,867	\$171,939
31	Eddy II	Eddy	TX	93	10.00	N/A	15%	25%	58%	2%	551	\$59,627	\$139,088
32	Somerset	Somerset	TX	128	10.60	N/A	5%	95%	0%	0%	1,293	\$41,574	\$135,490
33	DG Amp Piqua	Piqua	OH	86	12.60	2	26%	16%	58%	0%	6,735	\$38,919	\$96,555
34	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320
35	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571
36	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333
37	Whitehorn	Gretna	VA	N/A	50.00	N/A	N/A	N/A	N/A	N/A	166	\$43,179	\$168,750
38	Altavista	Altavista	VA	720	80.00	N/A	N/A	N/A	N/A	N/A	7	\$50,000	\$341,667
39	Hattiesburg	Hattiesburg	MS	400	50.00	N/A	10%	85%	5%	0%	1,065	\$28,545	\$129,921
40	Bremen	Bremen	IN	37	6.80	15	40%	60%	0%	0%	388	\$62,855	\$232,857
41	North Rock	Fulton	WI	472	50.00	N/A	3%	40%	57%	0%	236	\$86,238	\$370,062
42	Wood County	Saratoga	WI	1,200	150.00	N/A	N/A	N/A	N/A	N/A	187	\$74,110	\$204,545
43	Solidago	Isle of Wight	VA	193	20.00	N/A	N/A	N/A	N/A	N/A	62	\$88,375	\$312,500
44	Buckingham	Cumberland	VA	240	39.80	50	4%	6%	90%	0%	120	\$59,445	\$251,562
45	Crane	Burns City	IN	182	24.30	100	N/A	N/A	N/A	N/A	114	\$68,227	\$273,077
46	Kokomo 1	Kokomo	IN	83	5.40	5	30%	36%	0%	34%	8,656	\$50,193	\$168,723
47	White Tail 1	Mowersville	PA	135	13.50	20	2%	73%	25%	0%	254	\$81,086	\$354,297
48	Twiggs	Dry Branch	GA	N/A	200.00	N/A	N/A	N/A	N/A	N/A	15	\$55,000	\$50,000
49	Kings Bay	Kings Bay	GA	N/A	30.00	N/A	N/A	N/A	N/A	N/A	721	\$102,293	\$364,808
50	Dougherty	Albany	GA	N/A	120.00	N/A	N/A	N/A	N/A	N/A	30	\$60,354	\$204,167

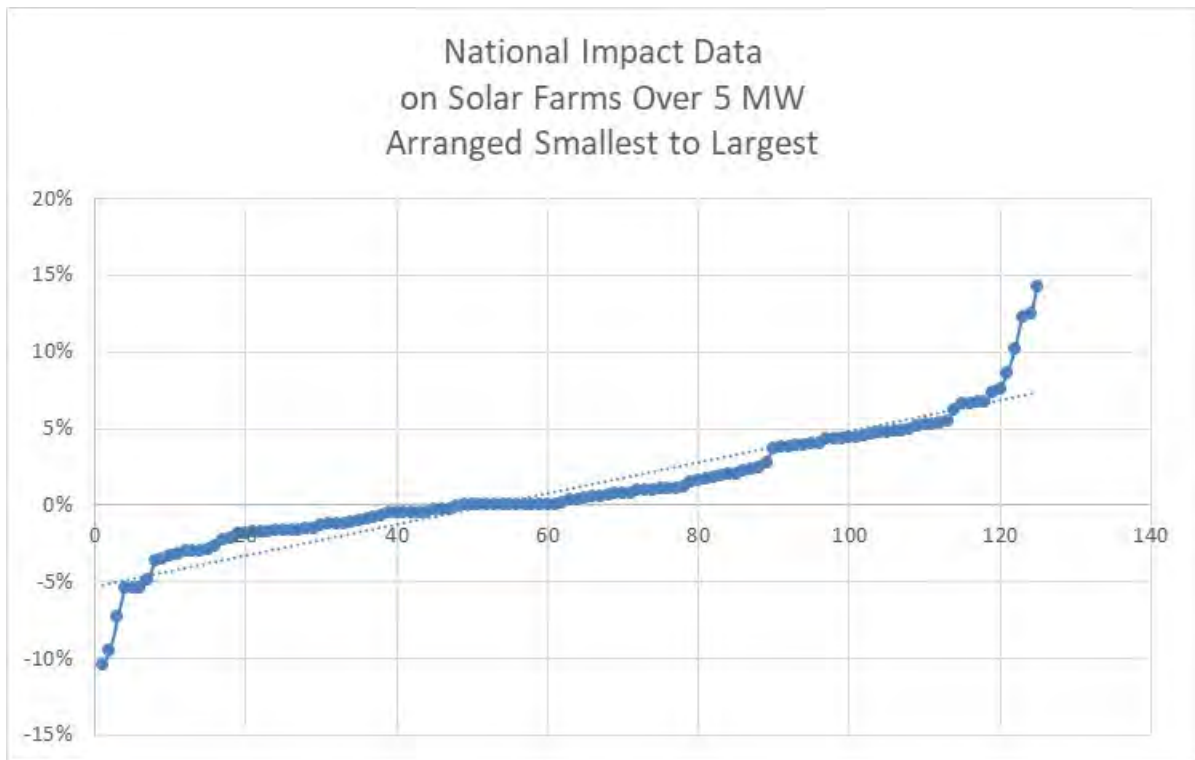
Matched Pair Summary			Adj. Uses By Acreage							1 mile Radius (2020 Data)			
Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	
51	Whitetail 2	St Thomas	PA	293	20.00	N/A	N/A	N/A	N/A	N/A	107	\$85,844	\$274,265
52	Elk Hill 1	Mercersburg	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	791	\$72,722	\$372,932
53	Elk Hill 2	Mercersburg	PA	N/A	15.00	N/A	N/A	N/A	N/A	N/A	454	\$81,208	\$484,672
54	Cottontail 1	York	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	1,495	\$84,872	\$315,508
55	Cottontail 2	York	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	707	\$61,415	\$383,896
56	Grazing Yak	Calhan	CO	272	35.00	N/A	0%	97%	3%	0%	40	\$78,104	\$623,214
57	San Luis Villy	Hooper	CO	308	35.00	N/A	5%	95%	0%	0%	11	\$59,164	\$450,000
58	SR Jenkins	Ft. Lupton	CO	142	13.00	N/A	2%	90%	8%	0%	129	\$114,961	\$802,703
59	Big Horn 1	Pueblo	CO	2,760	240.00	N/A	0%	44%	2%	54%	20	\$75,000	\$400,000
60	Bison/Raw	Wellington	CO	1,160	52.00	N/A	0%	93%	7%	0%	0	\$0	\$0
61	Alamosa	Mosca	CO	163	30.00	N/A	0%	87%	13%	0%	7	\$0	\$0
62	Pioneer	Bennett	CO	611	110.00	N/A	3%	81%	16%	0%	67	\$82,329	\$497,991
63	Sandhill/SunE	Mosca	CO	N/A	10.00	N/A	N/A	N/A	N/A	N/A	4	\$0	\$0
Average				415	47.20	33	20%	56%	19%	6%	1,118	\$64,953	\$266,047
Median				182	20.00	18	12%	63%	7%	0%	398	\$63,652	\$256,306
High				3,500	617.00	160	98%	98%	94%	54%	8,656	\$120,861	\$802,703
Low				35	5.00	0	0%	0%	0%	0%	0	\$0	\$0

From these 63 solar projects, I have derived 125 data points. The data shows no negative impact at distances as close as 105 feet between a solar panel and the nearest point on a home. The range of impacts is -10% to +14% with an average and median of +0%.

	MW	Avg. Distance	% Dif
Average	73.76	600	1%
Median	20.00	440	0%
High	617.00	2,020	14%
Low	5.00	145	-10%

While the range is broad, the chart below shows the data points in range from lowest to highest. There are only 3 data points out of 125 that show a negative impact (-6% or more). The rest support either a finding of no impact or 12 of the data points suggest a positive impact (+6% or more) due to adjacency to a solar project. As discussed earlier in this report, findings between +/-5% are typical market variation/imperfection and are not indicative of a positive or negative impact. If I were to consider impacts within that range as indicative of market impacts, then the majority of the impacts would suggest a positive impact on property value as indicated by the +1% average impact and +0% median impact.

However, based on the Market Imperfection discussion earlier in this report, I consider this data to strongly support a finding of no impact on value as most of the findings are within typical market variation and even within that, most are mildly positive findings.



D. Larger Solar project

I have also considered larger solar project to address impacts related to larger project. Project have been increasing in size and most of the project between 100 and 1000 MW are newer with little time for adjoining sales. I have included a breakdown of solar project with 20 MW to 80 MW facilities with one 500 MW facility.

Matched Pair Summary - @20 MW And Larger						Adj. Uses By Acreage					1 mile Radius (2010-2020 Data)		
Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306
4	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	\$70,158	\$187,037
5	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453
6	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	\$76,155	\$269,922
7	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076
8	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435
9	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347
10	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	\$47,208	\$169,214
11	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	\$46,839	\$110,361
12	Picure Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	\$81,081	\$280,172
13	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	\$80,997	\$292,308
14	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208
15	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	\$50,355	\$231,408
16	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320
17	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571
18	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333
19	Whitehorn	Gretna	VA	N/A	50.00	N/A	N/A	N/A	N/A	N/A	166	\$43,179	\$168,750
20	Altavista	Altavista	VA	720	80.00	N/A	N/A	N/A	N/A	N/A	7	\$50,000	\$341,667
21	Solidago	Isle of Wight	VA	193	20.00	N/A	N/A	N/A	N/A	N/A	62	\$88,375	\$312,500
22	Hattiesburg	Hattiesburg	MS	400	50.00	N/A	10%	85%	5%	0%	1,065	\$28,545	\$129,921
23	North Rock	Fulton	WI	472	50.00	N/A	3%	40%	57%	0%	236	\$86,238	\$370,062
24	Wood County	Saratoga	WI	1,200	150.00	N/A	N/A	N/A	N/A	N/A	187	\$74,110	\$204,545
25	Buckingham	Cumberland	VA	240	39.80	50	4%	6%	90%	0%	120	\$59,445	\$251,562
26	Crane	Burns City	IN	182	24.30	100	N/A	N/A	N/A	N/A	114	\$68,227	\$273,077
27	Twiggs	Dry Branch	GA	N/A	200.00	N/A	N/A	N/A	N/A	N/A	15	\$55,000	\$50,000
28	Kings Bay	Kings Bay	GA	N/A	30.00	N/A	N/A	N/A	N/A	N/A	721	\$102,293	\$364,808
29	Dougherty	Albany	GA	N/A	120.00	N/A	N/A	N/A	N/A	N/A	30	\$60,354	\$204,167
30	Whitetail 2	St Thomas	PA	293	20.00	N/A	N/A	N/A	N/A	N/A	107	\$85,844	\$274,265
31	Elk Hill 1	Mercersburg	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	791	\$72,722	\$372,932
32	Cottontail 1	York	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	1,495	\$84,872	\$315,508
33	Cottontail 2	York	PA	N/A	20.00	N/A	N/A	N/A	N/A	N/A	707	\$61,415	\$383,896
34	Grazing Yak	Calhan	CO	272	35.00	N/A	0%	97%	3%	0%	40	\$78,104	\$623,214
35	San Luis Villy	Hooper	CO	308	35.00	N/A	5%	95%	0%	0%	11	\$59,164	\$450,000
36	Big Horn 1	Pueblo	CO	2,760	240.00	N/A	0%	44%	2%	54%	20	\$75,000	\$400,000
37	Bison/Raw	Wellington	CO	1,160	52.00	N/A	0%	93%	7%	0%	0	\$0	\$0
38	Alamosa	Mosca	CO	163	30.00	N/A	0%	87%	13%	0%	7	\$0	\$0
39	Pioneer	Bennett	CO	611	110.00	N/A	3%	81%	16%	0%	67	\$82,329	\$497,991
Average			640	70.89	13%	66%	18%	5%	486	\$65,801	\$274,788		
Median			335	35.00	6%	74%	5%	0%	127	\$70,158	\$276,347		
High			3,500	617.00	75%	98%	94%	54%	2,446	\$120,861	\$623,214		
Low			121	19.60	0%	0%	0%	0%	0	\$0	\$0		

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

I have included a breakdown of solar project with 50 MW to 500 MW facilities adjoining.

Matched Pair Summary					Adj. Uses By Acreage					1 mile Radius (2010-2020 Data)			
Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306
4	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435
5	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347
6	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320
7	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571
8	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333
9	Hattiesburg	Hattiesburg	MS	400	50.00	N/A	10%	85%	5%	0%	1,065	\$28,545	\$129,921
10	North Rock	Fulton	WI	472	50.00	N/A	3%	40%	57%	0%	236	\$86,238	\$370,062
11	Wood County	Saratoga	WI	1,200	150.00	N/A	N/A	N/A	N/A	N/A	187	\$74,110	\$204,545
12	Twiggs	Dry Branch	GA	N/A	200.00	N/A	N/A	N/A	N/A	N/A	15	\$55,000	\$50,000
13	Dougherty	Albany	GA	N/A	120.00	N/A	N/A	N/A	N/A	N/A	30	\$60,354	\$204,167
14	Big Horn 1	Pueblo	CO	2,760	240.00	N/A	0%	44%	2%	54%	20	\$75,000	\$400,000
15	Bison/Raw	Wellington	CO	1,160	52.00	N/A	0%	93%	7%	0%	0	\$0	\$0
16	Pioneer	Bennett	CO	611	110.00	N/A	3%	81%	16%	0%	67	\$82,329	\$497,991
Average				1,124	132	41	13%	62%	21%	5%	494	\$65,413	\$261,025
Median				619	77	2	10%	74%	5%	0%	157	\$68,894	\$266,327
High				3,500	617	160	41%	97%	94%	54%	2,446	\$120,861	\$497,991
Low				347	50	0	0%	0%	0%	0%	0	\$0	\$0

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

The data for these larger solar projects is shown in the SE USA and the National data breakdowns with similar landscaping, setbacks and range of impacts that fall mostly in the +/-5% range as can be seen earlier in this report.

Below is a summary of 238 projects ranging in size from 50 MW up to 1,000 MW with an average size of 119.7 MW and a median of 80 MW. The average closest distance for an adjoining home is 365 feet, while the median distance is 220 feet. The closest distance is 50 feet. The mix of adjoining uses is similar with most of the adjoining uses remaining residential or agricultural in nature. This is the list of solar project that I have researched for possible matched pairs and not a complete list of larger solar project in those states.

**Total Number of Solar Farms
Researched Over 50 MW**

238

	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre			
						Res	Agri	Agri/Res	Com
Average	119.7	1521.4	1223.3	1092	365	10%	68%	18%	4%
Median	80.0	987.3	805.5	845	220	7%	72%	12%	0%
High	1000.0	19000.0	9735.4	6835	6810	98%	100%	100%	70%
Low	50.0	3.0	3.0	241	50	0%	0%	0%	0%

VII. Distance Between Homes and Panels

I have measured distances at matched pairs as close as 105 feet between panel and home to show no impact on value. This measurement goes from the closest point on the home to the closest solar panel. This is a strong indication that at this distance there is no impact on adjoining homes where a landscaping screen can be established.

However, in tracking other approved solar project, I have found that it is common for there to be homes within 100 to 150 feet of solar panels. Given the visual barriers in the form of privacy fencing or landscaping, there is no sign of negative impact.

I have also tracked a number of locations where solar panels are between 50 and 100 feet of single-family homes. In these cases the landscaping is typically a double row of more mature evergreens at time of planting. There are many examples of solar project with one or two homes closer than 100-feet, but most of the adjoining homes are further than that distance.

In areas where landscaping screens are more challenging the distances to adjoining homes tend to increase. The distances at the subject property are all over 1,000 feet to the nearest home. To illustrate what a view like this does, I have considered the following data using GoogleEarth.

The visual analysis done for a solar farm with no landscaping barrier is shown below starting with the SPS5 Hope Solar Farm in New Mexico.

SPS5 Hope Solar Farm, Carlsbad, Eddy County, New Mexico



This solar farm is 10.1 MW solar farm with nearby residential uses. The closest homes to the east are around 1,800 feet from the nearest panels. The closest homes to the north are around 2,700 feet from the nearest panels. The closest homes to the south are around 3,000 feet from the nearest panel.

I did not identify any recent adjoining home sales for analysis.

This solar farm has no screen and is visible from W. Derrick Road that runs along the southern side of the project. I was unable to find current imagery using GoogleEarth Streetview to determine visibility from the nearby homes as the solar farm was built after the most recent Streetview image. I did run a series of test images along W. Derrick Road using GoogleEarth Streetview where they did have more current images to determine relative visibility of the site at different distances. None of these images are anything more than a screen capture of Streetview at distances of 180 feet, 500 feet, 1,000 feet and 2,000 feet. The panels are detectable within the image at 180 and 500 feet. At 500 feet the view is very low and below the horizon and blends in with the view. At 1,000 and 2,000 feet the panels are not readily detectable.



Image facing north from W. Derrick Road from Streetview at 180 feet from the nearest panel



Image facing northeast from W. Derrick Road from Streetview at 500 feet from nearest panel.

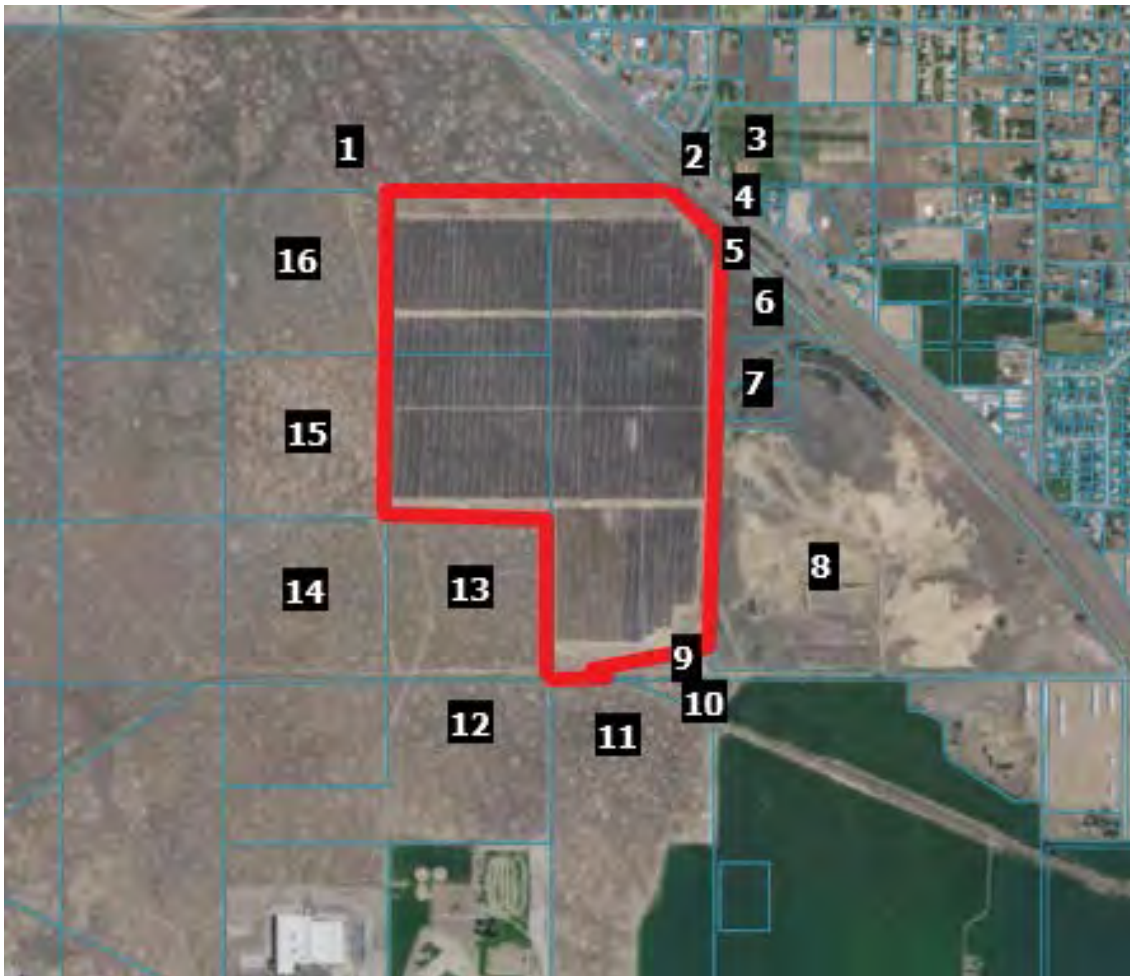


Image facing northeast from W. Derrick Road from Streetview at 1,000 feet from nearest panel



Image facing northeast from W. Derrick Road from Streetview at 2,000 feet from nearest panel.

Mountain Home Solar, Mountain Home, Elmore County, ID

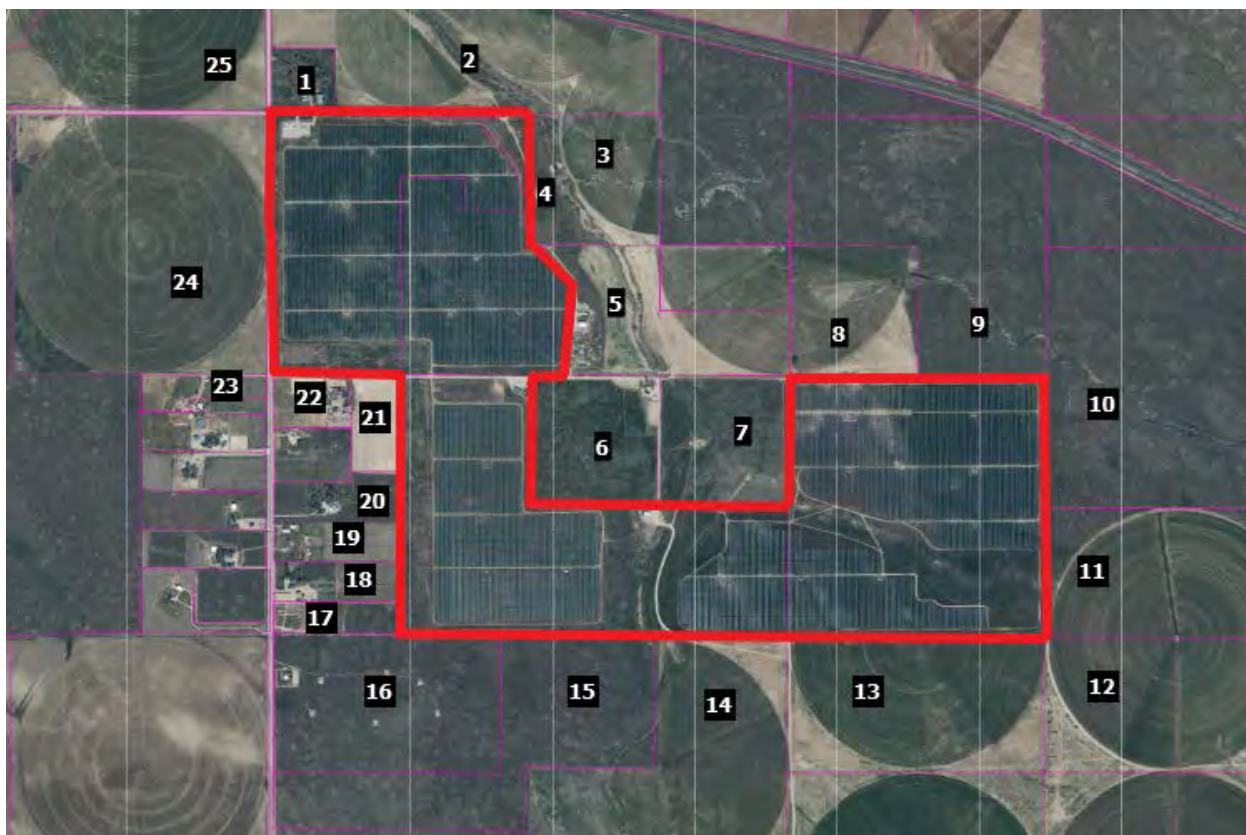


This 20 MW solar project was built in 2018.

For further comparison, I considered the closest point that the GoogleEarth image had for this solar project which is located at about 1934 Sunset Strip. The distance measured from this location on GoogleEarth is 415 feet from the nearest panel to where the image was taken from. The panels to the right of the image are further away and to the far right of the image there are no panels for comparison.



Idaho Solar 1, Boise, Ada County, ID



This project was built in 2016 for a 40 MW solar project.

I was able to find a street view image on the north side of this project on Barker Road. I measured off a distance of 210 feet from the closest panel and then took this image from that point. The panels are visible but quickly blend in with the background at this distance. The trees and shrubs break up the view somewhat but were not planted as an intentional screen for the solar project.



I also went to the east end of the solar project and measured off 210 feet to take an image in the other direction. This shows a similar view with panels and fencing visible, but again they make up a small percentage of the overall view. The small shrubs shown to the right of the photo would provide a softening of the image if expanded where the project is closer to homes.

At these distances, I would expect some landscaping screening if there were a home involved. I was not able to get a view of this project from 500 feet as the street view imagery did not extend far enough along that road from one side and the substation blocks the view from the other end.



VIII. Topography

As shown on the summary charts for the solar project, I have been identifying the topographic shifts across the solar project considered. Differences in topography can impact visibility of the panels, though typically this results in distant views of panels as opposed to up close views. The topography noted for solar project showing no impact on adjoining home values range from as much as 160-foot shifts across the project. Given that appearance is the only factor of concern and that distance plus landscape buffering typically addresses up close views, this leaves a number of potentially distant views of panels. I specifically note that in Crittenden in KY there are distant views of panels from the adjoining homes that showed no impact on value despite very substantial topographic shifts.

General rolling terrain with some distant solar panel views shows no impact on adjoining property value.

All of that said, this project only has a 20-foot shift across it which is a nominal topo shift over such an area and this is far below the range considered in the comparables.

IX. Research on Solar Projects

A. Appraisal Market Studies

I have also considered a number of impact studies completed by other appraisers as detailed below.

CohnReznick – Property Value Impact Study: Adjacent Property Values Solar Impact Study: A Study of Eight Existing Solar Facilities

Patricia McGarr, MAI, CRE, FRICS, CRA and Andrew R. Lines, MAI with CohnReznick completed an impact study for a proposed solar project in Cheboygan County, Michigan completed on June 10, 2020. I am familiar with this study as well as a number of similar such studies completed by CohnReznick. I have not included all of these studies, but I submit this one as representative of those studies.

This study addresses impacts on value from eight different solar projects in Michigan, Minnesota, Indiana, Illinois, Virginia and North Carolina. These solar projects are 19.6 MW, 100 MW, 11.9 MW, 23 MW, 71 MW, 61 MW, 40 MW, and 19 MW for a range from 11.9 MW to 100 MW with an average of 31 MW and a median of 31.5 MW. They analyzed a total of 24 adjoining property sales in the Test Area and 81 comparable sales in the Control Area over a five-year period.

The conclusion of this study is that there is no evidence of any negative impact on adjoining property values based on sales prices, conditions of sales, overall marketability, potential for new development or rate of appreciation.

Christian P. Kaila & Associates – Property Impact Analysis – Proposed Solar Power Plant Guthrie Road, Stuarts Draft, Augusta County, Virginia, 2020

Christian P. Kaila, MAI, SRA and George J. Finley, MAI developed an impact study as referenced above dated June 16, 2020. This was for a proposed 83 MW facility on 886 acres.

Mr. Kaila interviewed appraisers who had conducted studies and reviewed university studies and discussed the comparable impacts of other development that was allowed in the area for a comparative analysis of other impacts that could impact viewshed based on existing allowed uses for the site. He also discussed in detail the various other impacts that could cause a negative impact and how solar project do not have such characteristics.

Mr. Kaila also interviewed county planners and real estate assessors in eight different Virginia counties with none of the assessors identifying any negative impacts observed for existing solar project.

Mr. Kaila concludes on a finding of no impact on property values adjoining the indicated solar project.

Fred Beck, MAI, CCIM – Impact Analysis in Lincoln County, North Carolina, 2013

Mr. Fred Beck, MAI, CCIM completed an impact analysis in 2013 for a proposed 5 MW solar project that concluded on a negative impact on value. That report relied on a single cancelled contract for an adjoining parcel where the contracted buyers indicated that the solar project was the reason for the cancellation. It also relied on the activities of an assessment impact that was applied in a nearby county.

Mr. Beck was interviewed as part of the Christian Kalia study noted above. From that I quote “Mr. Beck concluded on no effect on moderate priced homes, and only a 5% change in his limited research of higher priced homes. His one sale that fell through is hardly a reliable sample.”

Also noted in the Christian Kalia interview is a response from Mr. Beck indicating that in his opinion “the homes were higher priced homes and had full view of the solar project.” Based on a description of screening so that “the solar project would not be in full view to adjoining property owners. Mr. Beck said in that case, he would not see any drop in property value.”

NorthStar Appraisal Company – Impact Analysis for Nichomus Run Solar, Pilesgrove, New Jersey, 2020

Mr. William J. Sapio, MAI with NorthStar Appraisal Company considered a matched pair analysis for the potential impact on adjoining property values to this proposed 150 MW solar project. Mr. Sapio considered sales activity in a subdivision known as Point of Woods in South Brunswick Township and identified two recent new homes that were constructed and sold adjoining a 10 MW solar project called New Road Solar and compared them to similar homes in that subdivision that did not adjoin the solar project. These homes sold in the \$1,290,450 to \$1,336,613 price range and these homes were roughly 200 feet from the closest solar panel.

Based on this analysis, he concluded that the adjoining solar project had no impact on adjoining property value.

MR Valuation Consulting, LLC – The Kuhl Farm Solar Development and The Fischer Farm Solar Development – New Jersey, 2012

Mr. Mark Pomykacz, MAI MRICS with MR Valuation Consulting, LLC considered a matched pair analysis for sales near the 8 MW Kuhl Farm Solar (aka Flemington Solar). The sales data presented supported a finding of no impact on property value for nearby and adjoining homes and concludes that there is no impact on marketing time and no additional risk involved with owning, building, or selling properties next to the solar project.

Mary McClinton Clay, MAI – McCracken County Solar Project Value Impact Report, Kentucky, 2021

Ms. Mary Clay, MAI reviewed a report by Kirkland Appraisals in this case and also provided a differing opinion of impact. Having testified opposite Ms. Clay, she has stated that she does not confirm her data and does not use an appropriate method for time adjustments.

Ms. Clay was initially hired by Wells Engineering who was working on behalf of the Kentucky State Siting Board to review applications. Wells Engineering rejected her findings in their summary. The

Kentucky State Siting Board rejected her findings as well. When I testified opposite Ms. Clay, she admitted that the Kentucky State Siting Board has never accepted her findings.

The comments throughout this study are heavy in adjectives, avoids stating facts contrary to the conclusion and shows a strong selection bias.

Kevin T. Meeks, MAI – Corcoran Solar Impact Study, Minnesota, 2017

Mr. Kevin Meeks, MAI reviewed a report by Kirkland Appraisals in this case and also provided additional research on the topic with additional paired sales. The sales he considered are well presented and show that they were confirmed by third parties and all of the broker commentary is aligned with the conclusion that the adjoining solar project considered had no impact on the adjoining home values.

Mr. Meeks also researched a 100 MW project in Chisago County, known as North Star Solar Garden in MN. He interviewed local appraisers and a broker who was actively marketing homes adjoining that solar project to likewise support a finding of no impact on property value.

John Keefe, Chisago County Assessor, Chisago County Minnesota Assessor’s Office, 2017

This study was completed by the Chisago County Minnesota Assessor’s Office on property prices adjacent to and in close vicinity of a 1,000-acre North Star solar project in Minnesota. The study concluded that the North Star solar project had “no adverse impact” on property values. Mr. Keefe further stated that, “It seems conclusive that valuation has not suffered.”

Tim Connelly, MAI – Solar Impact Study of Proposed Solar Facility, New Mexico, 2023

This study is a detailed review of an Impact Study completed by Kirkland Appraisals, LLC for Rancho Viejo Solar. It goes through all of the analysis and confirms the applicability and reliability of the methods and conclusions. Mr. Connelly, MAI concurs that “the proposed solar farm will not have a negative impact on market value, marketability, or enjoyment of property in the immediate vicinity of the proposed project.”

Donald Fisher, ARA, 2021

Donald Fisher has completed a number of studies on solar project and was quoted by ASFMRA News (ASFMRA: American Society of Farm Managers and Rural Appraisers) in February 15, 2021 stating, “Most of the locations were in either suburban or rural areas, and all of those studies found either a neutral impact or, ironically, a positive impact, where values on properties after the installation of solar project went up higher than time trends.”

Jennifer N. Pitts, MAI - Study of Residential Market Trends Surrounding Six Utility-Scale Solar Project in Texas, 2023

This study was completed by Real Property Analytics with Ms. Pitts along with Erin M. Kiella, PhD, and Chris Yost-Bremm, PhD. This analysis considered these solar projects through different stages of the market from announcement of the project, during construction, and after construction. They found no indication of a negative impact on sales price, the ratio of sales price to listing price, or the number of Days on Market. They also researched individual sales and interviewed local brokers who confirmed that market participants were knowledgeable of the solar project and did not result in a negative impact on sales price or marketing time.

Conclusion of Impact Studies

Of the ten studies noted eight included actual sales data to derive an opinion of no impact on value. The two studies to conclude on a negative impact includes the Fred Beck study based on no actual sales data, and he has since indicated that with landscaping screens he would not conclude on a

negative impact (see comments above). The other study by Mary Clay shows improper adjustments for time, a lack of confirmation of sales comparables, and exclusion of data that does not support her initial position.

I have relied on these studies as additional support for the findings in this impact analysis.

B. Articles

I have also considered a number of articles on this subject as well as conclusions and analysis as noted below.

Farm Journal Guest Editor, March 22, 2021 – Solar’s Impact on Rural Property Values

Andy Ames, ASFMRA (American Society of Farm Managers and Rural Appraisers) published this article that includes a discussion of his survey of appraisers and studies on the question of property value related to solar project. He discusses the university studies that I have cited as well as Patricia McGarr, MAI.

He also discusses the findings of Donald A. Fisher, ARA, who served six years as the Chair of the ASFMRA’s National Appraisal Review Committee. He is also the Executive Vice President of the CNY Pomeroy Appraiser and has conducted several market studies on solar project and property impact. He is quoted in the article as saying, “Most of the locations were in either suburban or rural areas, and all of those studies found either a neutral impact, or ironically, a positive impact, where values on properties after installation of solar project went up higher than time trends.”

Howard Halderman, AFM, President and CEO of Halderman Real Estate and Farm Management attended the ASFMRA solar talk hosted by the Indiana Chapter of the ASFMRA and he concludes that other rural properties would likely see no impact and farmers and landowners shown even consider possible benefits. “In some cases, farmers who rent land to a solar company will insure the viability of their farming operation for a longer time period. This makes them better long-term tenants or land buyers so one can argue that higher rents and land values will follow due to the positive impact the solar leases offer.”

More recently in August 2022, Donald Fisher, ARA, MAI and myself led a webinar on this topic for the ASFMRA discussing the issues, the university studies and specific examples of solar project having no impact on adjoining property values.

National Renewable Energy Laboratory – Top Five Large-Scale Solar Myths, February 3, 2016

Megan Day reports from NREL regarding a number of concerns neighbors often express. Myth #4 regarding property value impacts addresses specifically the numerous studies on wind farms that show no impact on property value and that solar project have a significantly reduced visual impact from wind farms. She highlights that the appearance can be addressed through mitigation measures to reduce visual impacts of solar project through vegetative screening. Such mitigations are not available to wind farms given the height of the windmills and again, those studies show no impact on value adjoining wind farms.

North Carolina State University: NC Clean Energy Technology Center White Paper: Balancing Agricultural Productivity with Ground-Based Solar Photovoltaic (PV) Development (Version 2), May 2019

Tommy Cleveland and David Sarkisian wrote a white paper for NCSU NC Clean Energy Technology Center regarding the potential impacts to agricultural productivity from a solar project use. I have interviewed Tommy Cleveland on numerous occasions, and I have also heard him speak on these issues at length as well. He addresses many of the common questions regarding how solar project

work and a detailed explanation of how solar project do not cause significant impacts on the soils, erosion and other such concerns. This is a heavily researched paper with references included.

North Carolina Sustainable Energy Association: NC Solar and Agriculture, April 2017

This paper addresses specific impacts of solar energy development and agricultural uses and best practices for mitigating impacts to the land. This paper project that by 2030 as much as 5% of the NC's energy could come from solar and that it would only occupy 0.6% of the state's total agricultural land. It further discusses dual agricultural and solar use of the land in the form of agri-voltaics. This article includes 101 Endnotes and citations to other studies.

North Carolina State University: NC Clean Energy Technology Center White Paper: Health and Safety Impacts of Solar Photovoltaics, May 2017

Tommy Cleveland wrote a white paper for NCSU NC Clean Energy Technology Center regarding the health and safety impacts to address common questions and concerns related to solar project. This is a heavily researched white paper addressing questions ranging from EMFs, fire safety, as well as vegetation control and the breakdown of how a solar project works.

Massachusetts Department of Energy Resources, Department of Environmental Protection, Clean Energy Center: Clean Energy Results, June 2015

This is a collection of research on a variety of solar project topics. Much like the NCSU White Paper this addresses multiple questions about hazardous materials, EMFs and decommissioning with cited studies and resources throughout.

C. *Broker Commentary*

In the process of working up the matched pairs used later in this report, I have collected comments from brokers who have actually sold homes adjoining solar project indicating that the solar project had no impact on the marketing, timing, or sales price for the adjoining homes. I have comments from multiple brokers within this report including brokers from Colorado.

I have additional commentary from other states including New Jersey and Michigan that provide the same conclusion.

X. University Studies

I have also considered the following studies completed by four different universities related to solar project and impacts on property values.

A. *University of Texas at Austin, May 2018*
An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations

This study considers solar project from two angles. First it looks at where solar projects are being located and concludes that they are being located primarily in low density residential areas where there are fewer homes than in urban or suburban areas.

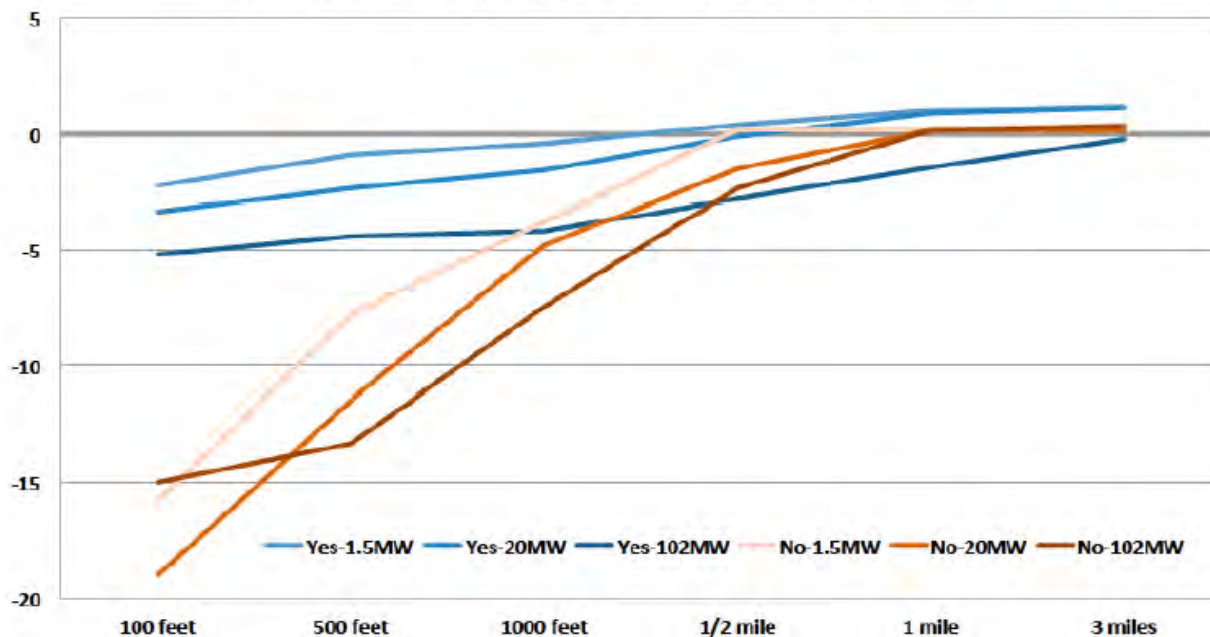
The second part is more applicable in that they conducted a survey of appraisers/assessors on their opinions of the possible impacts of proximity to a solar project. They consider the question in terms of size of the adjoining solar project and how close the adjoining home is to the solar project. I am very familiar with this part of the study as I was interviewed by the researchers multiple times as they were developing this. One very important question that they ask within the survey is very illustrative. They asked if the appraiser being surveyed had ever appraised a property next to a solar project. There is a very noticeable divide in the answers provided by appraisers who have experience

appraising property next to a solar project versus appraisers who self-identify as having no experience or knowledge related to that use.

On Page 16 of that study, they have a chart showing the responses from appraisers related to proximity to a facility and size of the facility, but they separate the answers as shown below with appraisers with experience in appraising properties next to a solar project shown in blue and those inexperienced shown in brown. Even within 100 feet of a 102 MW facility the response from experienced appraisers were -5% at most on impact. While inexperienced appraisers came up with significantly higher impacts. This chart clearly shows that an uninformed response widely diverges from the sales data available on this subject.

Chart B.2 - Estimates of Property Value Impacts (%) by Size of Facility, Distance, & Respondent Type

Have you assessed a home near a utility-scale solar installation?



Furthermore, the question cited above does not consider any mitigating factors such as landscaping buffers or screens which would presumably reduce the minor impacts noted by experienced appraisers on this subject.

The conclusion of the researchers is shown on Page 23 indicated that “Results from our survey of residential home assessors show that the majority of respondents believe that proximity to a solar installation has either no impact or a positive impact on home values.”

This analysis supports the conclusion of this report that the data supports no impact on adjoining property values.

B. University of Rhode Island, September 2020

Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island

The University of Rhode Island published a study entitled **Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island** on September 29, 2020 with lead researchers being Vasundhara Gaur and Corey Lang. I have read that study and interviewed Mr. Corey Lang related to that study. This study is often cited by opponents of solar projects, but the findings of that study have some very specific caveats according to the report itself as well as Mr. Lang from the interview.

While that study does state in the Abstract that they found depreciation of homes within 1-mile of a solar project, that impact is limited to non-rural locations. On Pages 16-18 of that study under Section 5.3 Heterogeneity in treatment effect they indicate that the impact that they found was limited to non-rural locations with the impact in rural locations effectively being zero. For the study they defined “rural” as a municipality/township with less than 850 population per square mile.

They further tested the robustness of that finding and even in areas up to 2,000 population per square mile they found no statistically significant data to suggest a negative impact. They have not specifically defined a point at which they found negative impacts to begin, as the sensitivity study stopped checking at the 2,000-population dataset.

Where they did find negative impacts was in high population density areas that was largely a factor of running the study in Massachusetts and Rhode Island which the study specifically cites as being the 2nd and 3rd most population dense states in the USA. Mr. Lang in conversation as well as in recorded presentations has indicated that the impact in these heavily populated areas may reflect a loss in value due to the scarce greenery in those areas and not specifically related to the solar project itself. In other words, any development of that site might have a similar impact on property value.

Based on this study I have checked the population for the Limon CCD for Lincoln County. Limon CCD has a population of 3,487 for 2023 based on HomeTownLocator which uses the US Census data and a total area of 348.70 square miles. This indicates a population density of 10 people per square mile which puts this well below the threshold indicated by the Rhode Island Study. I therefore conclude that the Rhode Island Study supports the indication of no impact on adjoining properties for the proposed solar project.

POPULATION		HOUSING	
Total Population	3,487 (100%)	Total HU (Housing Units)	1,220 (100%)
Population in Households	2,551 (73.2%)	Owner Occupied HU	705 (57.8%)
Population in Families	1,950 (55.9%)	Renter Occupied HU	377 (30.9%)
Population in Group Quarters ¹	936 (26.8%)	Vacant Housing Units	138 (11.3%)
Population Density	10	Median Home Value	\$212,019
Diversity Index ²	67	Average Home Value	\$337,199
		Housing Affordability Index ³	107

INCOME		HOUSEHOLDS	
Median Household Income	\$51,233	Total Households	1,082
Average Household Income	\$84,655	Average Household Size	2.36000000000
% of Income for Mortgage ⁴	25%	Family Households	633
Per Capita Income	\$26,284	Average Family Size	3
Wealth Index ⁵	61		

C. Georgia Institute of Technology, October 2020
Utility-Scale Solar project and Agricultural Land Values

This study was completed by Nino Abashidze as Post-Doctoral Research Associate of Health Economics and Analytics Lab (HEAL), School of Economics, Georgia Institute of Technology. This research was started at North Carolina State University and analyzes properties near 451 utility-scale ground-mount solar installations in NC that generate at least 1 MW of electric power. A total of 1,676 land sales within 5-miles of solar project were considered in the analysis.

This analysis concludes on Page 21 of the study “Although there are no direct effects of solar project on nearby agricultural land values, we do find evidence that suggests construction of a solar project may create a small, positive, option -value for landowners that is capitalized into land prices. Specifically, after construction of a nearby solar project, we find that agricultural land that is also located near transmission infrastructure may increase modestly in value.”

This study supports a finding of no impact on adjoining agricultural property values and in some cases could support a modest increase in value.

D. Master’s Thesis: ECU by Zachary Dickerson July 2018
A Solar project in My Backyard? Resident Perspectives of Utility-Scale Solar in Eastern North Carolina

This study was completed as part of a Master of Science in Geography Master’s Thesis by Zachary Dickerson in July 2018. This study sets out to address three questions:

1. Are there different aspects that affect resident satisfaction regarding solar project?
2. Are there variations in satisfaction for residents among different geographic settings, e.g. neighborhoods adjacent to the solar project or distances from the solar project?
3. How can insight from both the utility and planning sectors, combined with knowledge gained from residents, fill gaps in communication and policy writing in regard to solar project?

This was done through survey and interview with adjacent and nearby neighbors of existing solar project. The positive to neutral comments regarding the solar project were significantly higher than negative. The researcher specifically indicates on Page 46 “The results show that respondents generally do not believe the solar project pose a threat to their property values.”

The most negative comments regarding the solar project were about the lack of information about the approval process and the solar project prior to construction.

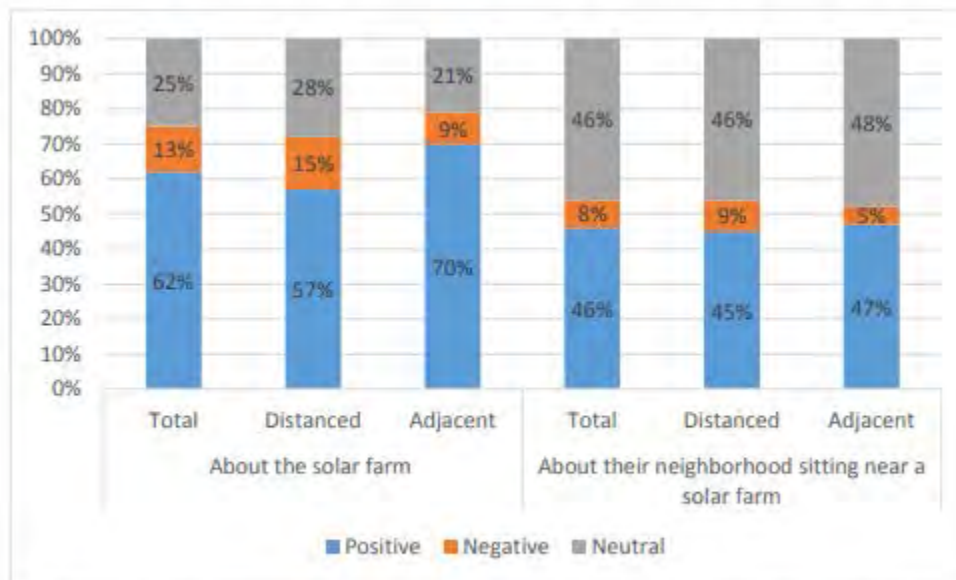


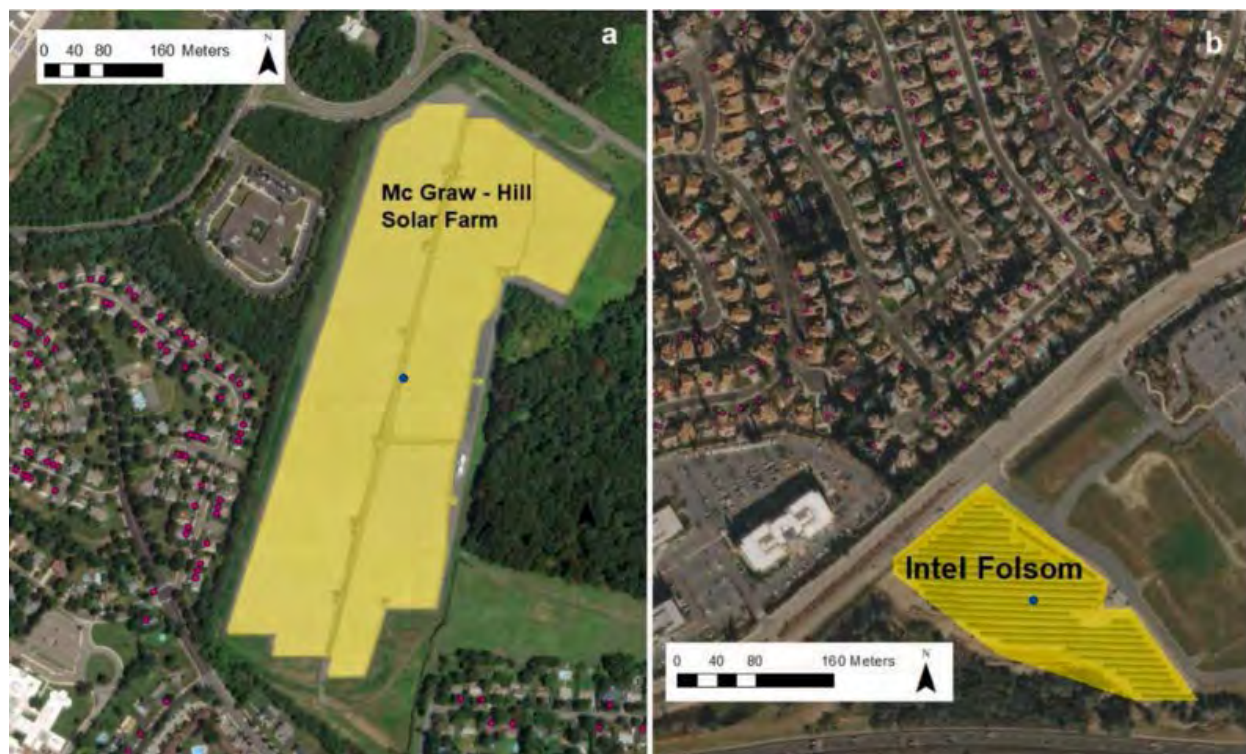
Figure 11: Residents' positive/negative word choices by geographic setting for both questions

E. Lawrence Berkeley National Lab, March 2023

Shedding light on large-scale solar impacts: An analysis of property values and proximity to photovoltaics across six U.S. states

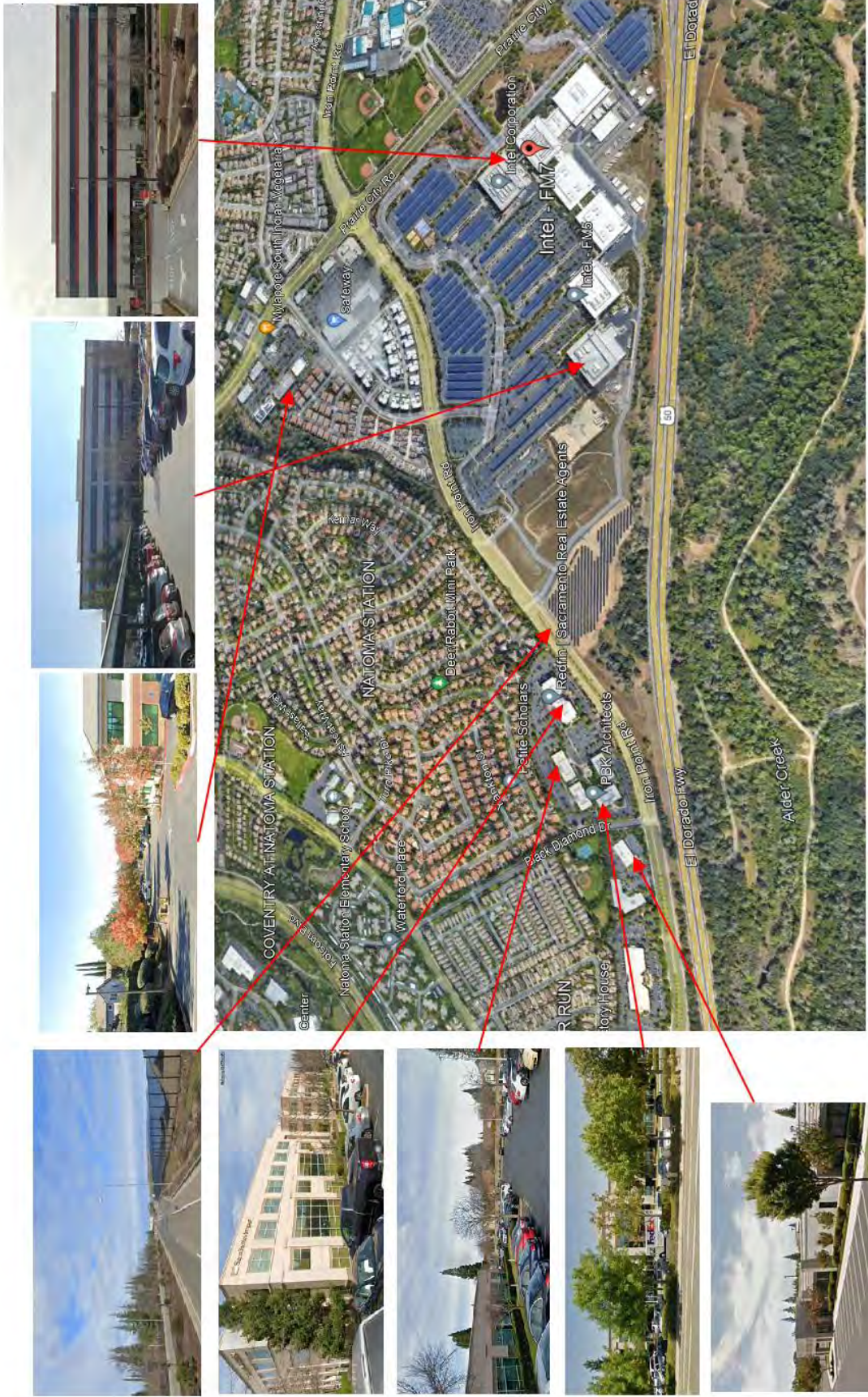
This study was completed by researchers including Salma Elmallah, Ben Hoen, K. Sydney Fujita, Dana Robson, and Eric Brunner. This analysis considers home sales before and after solar project were installed within a 1-mile radius and compared them to home sales before and after the solar project at a 2–4-mile radius. The conclusion found a 1.5% impact within 0.5 mile of a solar project as compared to homes 2-4 miles from solar project. Given the discussion on market imperfection earlier in this report identifies +/-5% impacts as being typical variation in the market, this is not considered a significant finding and falls within that typical variation.

This is the largest study of this kind on solar and addresses a number of issues, but also does not address a number of items that could potentially skew these results. First of all, the study looked at six states (CA, MA, MN, NC, NJ and CT) and found no impact in the three states with the most solar project activity and only found impacts in smaller sets of data in NC, NJ, and MA. The data does not in any way discuss actual visibility of solar project or address existing vegetation screens. This lack of addressing this is highlighted by the fact that they suggest in the abstract that vegetative shading may be needed to address possible impacts. Another notable issue is the fact that they do not address other possible impacts within the radii being considered. This lack of consideration is well illustrated within the study on Figure A.1 where they show satellite images of McGraw Hill Solar project in NJ and Intel Folsom in CA. The Folsom image clearly shows large highways separating the solar project from nearby housing, but with tower office buildings located closer to the housing being considered. In no place do they address the presence of these towers that essentially block those homes from the solar project in some places. An excerpt of Fig. A.1. is shown below.



For each of these locations, I have panned out a little further on Google Earth to show the areas illustrated to more accurately reflect the general area. For the McGraw Hill Solar project, you can see there is a large distribution warehouse to the west along with large offices and other industrial uses. Further to the west is a large/older apartment complex (Princeton Arms). To the east there are more large industrial buildings. However, it is even more notable that 1.67 miles away to the west is Cranbury Golf Club. Given how this analysis was set up, these homes around the industrial buildings are being compared to homes within this country club to help establish impacts from the solar project. Even considering the idea that each set is compared to itself before and after the solar project, it is not a reasonable supposition that homes in each area would appreciate at the same rates even if no solar project was included.





On the Intel Folsom map I have shown the images of two of the Intel Campus buildings, but there are roughly 8 such buildings on that site with additional solar panels installed in the parking lot as shown in that image. I included two photos that show the nearby housing having clear and close views of adjoining office parking lots. This illustrates that the homes in that 0.5-mile radius are significantly more impacted by the adjoining office buildings than a solar project located distantly that are not within the viewshed of those homes. Also, this solar project is located on land adjoining the Intel Campus. Furthermore, the street view at the solar project shows not only the divided four-lane highway that separates the office buildings and homes from the solar project, but also shows that there is no landscaping buffer at this location. All of these factors are ignored by this study. Below is another image of the Folsom Solar at the corner of Iron Point Road and Intel West Driveway which shows just how close and how unscreened this project is.



Compare that image from the McGraw Hill Street view facing south from County Rte 571. There is a distant view and much of the project is hidden by a mix of berms and landscaping. The analysis makes no distinction between these two projects in the analysis.



The third issue with this study is that it identifies impacts following development in areas where they note that “more adverse home price impacts might be found where LSPVPS (large-scale photovoltaic project) displace green space (consistent with results that show higher property values near green space.” The problem with this statement is that it assumes that the greenspace is somehow

guaranteed in these areas, when in fact, they could just as readily be developed as a residential subdivision and have the same impacts. They have made no effort to differentiate loss of greenspace through other development purposes such as schools, subdivisions, or other uses versus the impact of solar project. In other words, they may have simply identified the impact of all forms of development on property value. This would in fact be consistent with the comments in the Rhode Island study where the researchers noted that the loss of greenspace in the highly urban areas was likely due to the loss of greenspace in particular and not due to the addition of solar panels.

Despite these three shortcomings in the analysis – the lack of differentiating landscape screening, the lack of consideration of other uses within the area that could be impacting property values, and the lack of consideration of alternative development impacts – the study still only found impacts between 0 and 5% with a conclusion of 1.5% within a 0.5-mile radius. As discussed later in this report, real estate is an imperfect market and real estate transactions typically sell for much wider variability than 5% even where there are no external factors operating on property value.

I therefore conclude that the minor impacts noted in this study support a finding of no impact on property value. Most appraisals show a variation between the highest and lowest comparable sale that is substantially greater than 1.5% and this measured impact for all its flaws would just be lost in the static of normal real estate transactions.

**F. *Masters Thesis: Loyola University Chicago by Simeng Hao May 2023*
Assessing Property Value Impacts Near Utility-Scale Solar in the Midwest**

This study considered 70 utility-scale facilities built in the Midwest from 2009 to 2022 using data from the Lawrence Berkley National Laboratory. Using the difference-in-differences, method he found that proximity to solar project increased property values by 0.5% to 2.0%.

Included in this study is a summary of seven other studies including many of those noted above that considered a total of 3,296 projects with results ranging from 1.7% decline in value to no impact. Only 2 of the studies identified found negative results that ranged from 0.82% to 1.7% impact on property value, while the other five studies found no consistent negative impact.

Given that 5 of the 7 studies identified show no negative impact and the analysis by Mr. Hao shows a positive relationship up to 2%, I consider this analysis to support my conclusions on no impact on property value. While statistical studies note impacts of +/- 2%, as noted earlier in this report, market imperfection is generally greater than that rate and supports a conclusion of no impact. Essentially, while the statistical studies are showing minor variation, applying that to any one particular property whether plus or minus, would be unsupportable given that market imperfection is greater than that purported adjustment.

XI. Assessor Surveys

I have completed a survey of county assessors in Colorado with the breakdown of those responses below. Assessors indicated the number of solar farms in their area, and some replied to the question on property value as noted, while others simply did not reply to that question. Some of the no response answers indicated that they did not have enough data or would have to do more research. While those responses do suggest that they do not currently make adjustments, it is not how they responded so I leave those comments in the No Response zone as they did not directly answer the question. A total of 8 responded to the question and all 8 indicated they do not apply any changes to adjoining property value. Not a single one indicated that they currently make any adjustments to adjoining property value.

CO Assessor Survey on Solar Farm Property Value Impacts

County	Assessor's Name	Number of Farms	Change in Adjacent Property Value
Conejos	Naomi Keys	3 or 4	No response
Denver	Keith Erffmeyer	3	No
Garfield	Jim Yellico (Vicki Riley)	No response	Classification and value could change
Kiowa	Marci Miller	0, 2 in planning	No
La Plata	Carrie Woodson	0, 1 in planning	No response
Las Animas	Jodi Amato	1 operational, 1 in planning	No
Moffat	Charles "Chuck" Cobb	0, 5 in planning	No
Montezuma	Leslie Bugg	3 approved	No
Montrose	Brad Hughes	2, 1 in planning	Maybe, but would be based on sales data
Morgan	Tim Amen	2, operational, 3 in planning	No
Pitkin	Wendy Schultz	1	No
Rio Blanco	Renae Neilson	2	No response
Saguache	Peter Peterson	1	No
San Miguel	Sarah Enders	1	Not enough data
Yuma	Cindy Taylor	1 in planning	No response

Responses: 15

Negative Impact on Adjoining Value = Yes: 0

Negative Impact on Adjoining Value = No: 8

Negative Impact on Adjoining Value = No Response: 7

I have completed similar surveys of county assessors in a number of states, and I have shown the breakdown of those responses below. I have not had any assessor indicate a negative adjustment due to adjacency to a solar project in any state. These responses total 189 with 172 definitively indicating no negative adjustments are made to adjoining property values, 17 providing no response to the question, and 0 indicating that they do address a negative impact on adjoining property value.

Summary of Assessor Surveys

State	Responses	No	Yes	No
		Impact	Impact	Comment
North Carolina	39	39		
Virginia	17	17		
Indiana	31	31		
Colorado	15	8		7
Georgia	33	33		
Kentucky	10	6		4
Mississippi	4	2		2
New Mexico	5	5		
Ohio	24	20		4
South Carolina	11	11		
Totals	189	172	0	17

XII. Scope of Research

I have researched approximately 1,000 solar project and sites on which solar project are existing and proposed in Colorado, Idaho, Indiana, Ohio, Virginia, Illinois, Tennessee, North Carolina, Kentucky as well as other states to determine what uses are typically found in proximity with a solar project. The data I have collected and provided in this report strongly supports the assertion that solar projects are having no negative consequences on adjoining agricultural and residential values.

Beyond these references, I have quantified the adjoining uses for a number of solar projects to derive a breakdown of the adjoining uses for each solar project. The chart below shows the breakdown of adjoining or abutting uses by total acreage.

Percentage By Adjoining Acreage

	Res	Ag	Res/AG	Comm	Ind	Closest		All Res Uses	All Comm Uses
						Avg Home	Home		
Average	19%	53%	20%	2%	6%	887	344	91%	8%
Median	11%	56%	11%	0%	0%	708	218	100%	0%
High	100%	100%	100%	93%	98%	5,210	4,670	100%	98%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

I have also included a breakdown of each solar project by number of adjoining parcels to the solar project rather than based on adjoining acreage. Using both factors provides a more complete picture of the neighboring properties.

Percentage By Number of Parcels Adjoining

	Res	Ag	Res/AG	Comm	Ind	Avg Home	Closest Home	All Res Uses	All Comm Uses
Average	61%	24%	9%	2%	4%	887	344	93%	6%
Median	65%	19%	5%	0%	0%	708	218	100%	0%
High	100%	100%	100%	60%	78%	5,210	4,670	105%	78%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

Both of the above charts show a marked residential and agricultural adjoining use for most solar projects. Every single solar project considered included an adjoining residential or residential/agricultural use.

XIII. Specific Factors Related To Impacts on Value

I have completed a number of Impact Studies related to a variety of uses and I have found that the most common areas for impact on adjoining values typically follow a hierarchy with descending levels of potential impact. I will discuss each of these categories and how they relate to a solar project.

1. Hazardous material
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

1. Hazardous material

A solar project presents no potential hazardous waste byproduct as part of normal operation. Any fertilizer, weed control, vehicular traffic, or construction will be significantly less than typically applied in a residential development and especially most agricultural uses.

The various solar projects that I have inspected and identified in the addenda have no known environmental impacts associated with the development and operation.

2. Odor

The various solar projects that I have inspected produced no odor.

3. Noise

Whether discussing passive fixed solar panels, or single-axis trackers, there is no negative impact associated with noise from a solar project. The transformer has a hum similar to an HVAC that can only be heard in close proximity and the buffers on the property are sufficient to make emitted sounds effectively inaudible from the adjoining properties. A wide variety of noise studies have been conducted on solar project to illustrate compatibility between solar properties and nearby residential uses.

The various solar projects that I have inspected were inaudible from the roadways.

4. Traffic

Solar project will typically have no onsite employee's or staff. Even where there are onsite staff, the traffic generated is minimal after construction. Relative to other potential uses of the site (such as a residential subdivision), the additional traffic generated by a solar project use on this site is insignificant.

5. Stigma

There is no stigma associated with solar project and solar project and people generally respond favorably towards such a use. While an individual may express concerns about proximity to a solar project, there is no specific stigma associated with a solar project. Stigma generally refers to things such as adult establishments, prisons, rehabilitation facilities, and so forth.

Solar panels have no associated stigma and in smaller collections are found in yards and roofs in many residential communities. Solar project are adjoining elementary, middle and high schools as well as churches and subdivisions. I note that one of the solar projects in this report not only adjoins

a church but is actually located on land owned by the church. Solar panels on a roof are often cited as an enhancement to the property in marketing brochures.

I see no basis for an impact from stigma due to a solar project.

6. Appearance

I note that larger solar project using fixed or tracking panels are a passive use of the land that is in keeping with a rural/residential area. As shown below, solar projects are comparable to larger greenhouses. This is not surprising given that a greenhouse is essentially another method for collecting passive solar energy. The greenhouse use is well received in residential/rural areas and has a similar visual impact as a solar project.



The solar panels are all less than 15 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse and lower than a single-story residential dwelling. Were the subject property developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as these proposed panels.

As noted earlier, appearance is typically addressed through a combination of landscaping screens and distance. Distance appears to be the primary method used in Colorado at this time, but modest landscaping could be used in areas where homes are closer than 400 feet to mitigate/soften the view, which would be consistent with the data identified in this analysis.

Whenever you consider the impact of a proposed project on viewshed or what the adjoining owners may see from their property it is important to distinguish whether or not they have a protected viewshed or not. Enhancements for scenic vistas are often measured when considering properties that adjoin preserved open space and parks. However, adjoining land with a preferred view today conveys no guarantee that the property will continue in the current use. Any consideration of the impact of the appearance requires a consideration of the wide variety of other uses a property already

has the right to be put to, which for solar project often includes subdivision development, agricultural business buildings such as poultry, or large greenhouses and the like.

Dr. Randall Bell, MAI, PhD, and author of the book **Real Estate Damages**, Third Edition, on Page 146 “Views of bodies of water, city lights, natural settings, parks, golf courses, and other amenities are considered desirable features, particularly for residential properties.” Dr. Bell continues on Page 147 that “View amenities may or may not be protected by law or regulation. It is sometimes argued that views have value only if they are protected by a view easement, a zoning ordinance, or covenants, conditions, and restrictions (CC&Rs), although such protections are relatively uncommon as a practical matter. The market often assigns significant value to desirable views irrespective of whether or not such views are protected by law.”

Dr. Bell concludes that a view enhances adjacent property, even if the adjacent property has no legal right to that view. He then discusses a “borrowed” view where a home may enjoy a good view of vacant land or property beyond with a reasonable expectation that the view might be partly or completely obstructed upon development of the adjoining land. He follows that with “This same concept applies to potentially undesirable views of a new development when the development conforms to applicable zoning and other regulations. Arguing value diminution in such cases is difficult, since the possible development of the offending property should have been known.” In other words, if there is an allowable development on the site then arguing value diminution with such a development would be difficult. This further extends to developing the site with alternative uses that are less impactful on the view than currently allowed uses.

This gets back to the point that if a property has other uses that it could currently be developed as – say a feedlot, hog farm, poultry farm, dairy or other industrial/agricultural use - then those allowed alternative uses should be considered in the analysis. Essentially, if there are more impactful uses currently allowed, then how can you claim damages for a less impactful use.

XIV. Conclusion on Solar project

The paired sales analysis shows no negative impact in home values due to abutting or adjoining a solar project as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all support a finding of no impact on property value.

The distances indicated for the subject property are consistent with the paired sales showing no impact on adjoining property values given the distances involved.

Very similar solar project in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar projects have been approved adjoining agricultural uses, schools, churches, and residential developments.

I have found no difference in the mix of adjoining uses or proximity to adjoining homes based on the size of a solar project and I have found no significant difference in the matched pair data adjoining larger solar project versus smaller solar project.

Based on the data and analysis in this report, it is my professional opinion that the solar project proposed at the subject property will have no negative impact on the value of adjoining or abutting property. I note that some of the positive implications of a solar project that have been expressed by people living next to solar project include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it is quiet, and there is no traffic.

XV. Battery Energy Storage System (BESS) Data Set

I have considered the BESS component of this project by comparing it to stand alone BESS projects. BESS are often included in solar, but isolating just this one component started looking for similar projects based on an excel list provided by my client of projects with a BESS component. That list included 670 listings. I sorted that list to only projects over 50 MW and removed all projects that were clearly including a solar, wind or other power production facility as part of that BESS. This left me with the following list of 27 listings. It is notable that the earliest operational date for this set is June 9, 2020 with most of these projects being newer. This is a function of the technology being deployed at this scale only more recently, though the earliest system in the larger set was from December 1, 2003.

Owner Name	Plant Name	Plant State	Commercial Online Date	Storage Capacity MW
Byrd Ranch Storage LLC	Byrd Ranch Storage	Texas	10/21/2022	50.0
GlidePath Power Solutions LLC	Roughneck Storage	Texas	09/30/2022	50.0
KCE TX 11 LLC	Republic Road Storage	Texas	06/15/2022	50.0
KCE TX 13 LLC	Endurance Park Storage	Texas	12/28/2022	50.0
KCE TX 19 LLC	River Valley Storage 1	Texas	07/31/2023	50.0
KCE TX 21 LLC	River Valley Storage 2	Texas	07/31/2023	50.0
Coso Battery Storage LLC	Coso Battery Storage	California	04/01/2022	60.0
Valley Center ESS LLC	Valley Center ESS	California	12/01/2021	139.0
AES ES Alamitos LLC	Alamitos Energy Center	California	01/01/2021	100.0
Astral Energy LLC	Chisholm Grid Battery Storage	Texas	10/01/2021	100.0
Flower Valley II LLC	Flower Valley I - II	Texas	03/30/2022	100.0
Gambit Energy Storage LLC	Gambit Storage	Texas	06/14/2021	100.0
Ignacio Grid LLC	Ignacio Grid	Texas	03/17/2023	100.0
KCE TX 12 LLC	Silicon Hill Storage	Texas	10/31/2022	100.0
Madero Grid LLC	Madero Grid	Texas	03/17/2023	100.0
Swoose II LLC	Swoose 1 & 2	Texas	08/15/2022	100.0
Bat Cave Energy Storage LLC	Bat Cave Storage	Texas	10/22/2021	100.50
North Fork Energy Storage LLC	North Fork (TX)	Texas	10/22/2021	100.50
Lockhart ESS LLC	SEGS VIII	California	07/01/2023	109.0
Lancaster Area Battery Storage LLC	Lancaster Battery Storage	California	09/02/2022	127.0
North Central Valley Energy Storage LLC	North Central Valley Energy Storage	California	08/01/2023	132.0
ES 1A Group 2 Opco LLC	Edwards & Sanborn	California	08/01/2022	144.0
Wolf Tank Storage LLC	Wolf Tank Storage	Texas	07/18/2023	155.480
Acciona Energy USA Global LLC	Turquoise Storage	Texas	07/26/2023	196.210
Diablo Energy Storage LLC	Diablo Energy Storage	California	04/01/2022	200.0
Crossett Power Management LLC	Crossett Power	Texas	05/26/2022	200.0
Gateway Energy Storage LLC	Gateway Energy Storage	California	06/09/2020	250.0

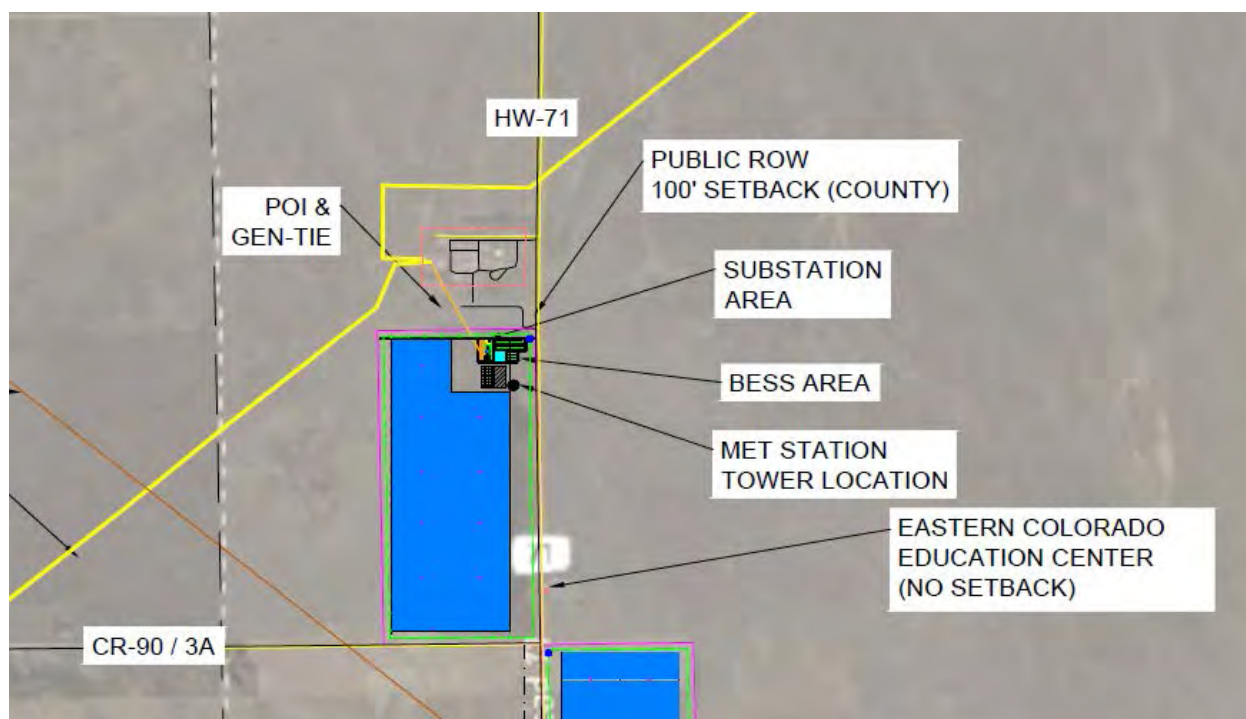
I used this as a starting point in identifying projects similar to the subject. I have not researched all of these examples, though I did identify the locations of most of these. I have examples shown later in this report that came from earlier analysis looking at such facilities identified in a different manner. I have additional projects shown later that are not included in this list above.

XVI. Similar Projects

I considered the following battery storage facilities in a variety of states for a comparison of similar battery energy storage systems (BESS) in proximity to residential uses. I have also searched these areas for recent sales to see if there is any impact on property values near these battery storage facilities, which will be addressed in the following section.

The primary use of this larger set is to show compatibility of BESS and residential uses as well as showing typical setbacks between these uses. These measured distances are from the closest point on the home to the closest piece of equipment. Where I have N/A, the facility does not have an aerial image that I can use to measure that distance. These distances were measured using GoogleEarth.

I note that the proposed distances at the subject property are much further away than the other identified projects. The subject property has a 150 MW BESS proposed near the north end of the project near the existing substation. There are no homes in this area.



Summary of Battery Data

#	Name	City/State	Acres	Capacity	Distance from	
					Closest Home	Adjoining Home
1	Ozone Park	Queens, NY	0.35	3 MW	30	203
2	Pomona	Rockland, NY	28.5	N/A	270	1196
3	Asheville	Asheville, NC	12.36	9 MW	130	452
4	East Hampton	E. Hampton, NY	17.58	5 MW	470	733
5	Diablo	Concord, CA	11.45	200 MW	320	361
6	Prospect	W. Columbia, TX	2.3	10 MW	400	400
7	Brazoria	Brazoria, TX	17.58	10 MW	130	438
8	Gambit	Angleton, TX	6.24	100 MW	215	243
9	Churchtown	Pennsville, NJ	3.13	10 MW	N/A	N/A
10	West Chicago	Chicago, IL	5	20 MW	430	450
11	McHenry	McHenry, IL	2.75	20 MW	260	283
12	Plumstead	Hornerstown, NJ	14.39	20 MW	155	943
13	Vista	Vista, CA	0.88	40 MW	130	172
14	Chisholm	Ft Worth, TX	21.74	100 MW	840	875
15	Port Lavaca	Prt Lavaca, TX	1.44	10 MW	N/A	N/A
16	Magnolia	Houston, TX	0.87	10 MW	180	190
17	Roughneck	W. Columbia, TX	4.55	50 MW	1,095	N/A
18	Silicon Hill	Pflugerville, TX	10.75	50 MW	350	N/A
19	N Central Valley	Stockton, CA	N/A	132 MW	N/A	N/A
20	Rush Springs	Marlow, OK	N/A	10 MW	N/A	N/A
21	Bat Cave	Mason, TX	N/A	101 MW	N/A	N/A
22	Outer Cape	Nantucket, MA	N/A	25 MW	435	N/A
23	Cranberry Pt	Carver, MA	6	150 MW	680	N/A
24	Medway	Medway, MA	N/A	250 MW	150	N/A
25	Beebe	Wakefield, MA	N/A	3 MW	N/A	N/A
		Average		54 MW	351	496
		Median		20 MW	270	419
		High		250 MW	1,095	1,196
		Low		3 MW	30	172

XVII. Market Data

I considered the following battery storage facilities in a variety of states where I was able to identify adjoining residential home sales. These home sales were then compared to similar homes in the area that sold in the same time frame but were not in proximity to the BESS. This is called a paired sales analysis and I have used this to determine if there is any impact that could be attributed to the adjacency/proximity to the BESS.

1 - Ozone Park Batteries

This system is located on 99th Street in Jamaica, Queens, New York. The below image shows the battery pack parcel outlined in red with a bowling alley to the north, a school to the south and homes to the east and west as well as a church to the west. Based on aerial imagery, this site was installed in early to mid-2018.

The two closest structures are the school at 65 feet and a church at 30 feet from the batteries. The nearby homes are on the opposing blocks, but the proximity to the school does illustrate a high confidence in public safety related to the battery facility and acceptance within that community.



Surrounding Uses

#	Address	GIS Data		Adjoin	Adjoin	Distance (ft)
		Acres	Present Use	Acres	Parcels	Home/Battery
1	98-18 Rockaway	0.76	Bowling	11.69%	6.67%	N/A
2		0.95	Office	14.62%	6.67%	N/A
3	10735 100th St	0.06	Residential	0.92%	6.67%	245
4	10737 100th St	0.06	Residential	0.92%	6.67%	260
5	10739 100th St	0.06	Residential	0.92%	6.67%	275
6	10741 100th St	0.06	Residential	0.92%	6.67%	290
7	10743 100th St	0.06	Residential	0.92%	6.67%	305
8	10915 98th St	3.74	School	57.54%	6.67%	65
9		0.27	School	4.15%	6.67%	N/A
10	10656 98th St	0.06	Residential	0.92%	6.67%	200
11	10654 98th St	0.06	Residential	0.92%	6.67%	195
12	10650 98th St	0.06	Residential	0.92%	6.67%	190
13	10646 98th St	0.06	Residential	0.92%	6.67%	190
14	10636 98th St	0.06	Residential	0.92%	6.67%	195
15	10645 (8th St	0.18	Church	2.77%	6.67%	30
Total		6.500		100.00%	100.00%	203
						Min 30

The closest recent home sale is 10726 101st Street that sold on October 9, 2018, after the battery storage facility was installed. This home is 345 feet from the closest battery and has a very obstructed view of that area based on the shrubs around the battery storage site as well as a strip of landscape greenery between the two sites. The sales price was \$600,000 for this 3 BR/1.5 BA home that was built in 1930 on a 0.06-acre site.

I compared this to a similar home built in 1930 in the same style and same size that sold at 10762 101st Street on October 9, 2018 for \$590,000. This home is just down the street but further from the battery storage system and sold on the same day for \$10,000 less. The proximity to the battery does not correlate to value impact in this instance as the home further away sold for less. This second home is across the street from the three-story John Adams High School which likely accounts for the lower price for this second property compared to the first which was adjacent to the same school, but not across from the building itself.

The matched pairs support a finding of no impact on value due to proximity to the battery system.

2 - Pomona Batteries

This battery storage system is located at 23 Diltz Road, Pomona, Rockland, New York. This location is more remote than the other system with greater distances separating homes from batteries, but all of the adjoining uses are residential or park. This battery site is located at the end of a road for estate-like homes on large acreage adjoining or in close proximity to Harriman State Park. There are some sales on Dritz Road adjoining the battery site and none of the broker statements identify that as a concern. But given the park, the Mahwah River exposure it is difficult to use these sales for matched pairs as there are too many unique factors and matched pairs require one unique factor.

Most recently I identified an October 11, 2022 sale of adjoining Parcel 4 that sold for \$500,000 for a 4.57-acre estate lot. This home adjoins Harriman State Park and the listing makes no mention of the nearby battery energy storage facility.

The site shows harmonious use in connection with residential uses. The closest identified home is 270 feet.



3 - Asheville Energy Storage System

This 9 MW battery storage system is located on a parcel with a substation built in 2020 (substation was built much earlier). This facility has significant residential development around it but no recent sales to consider.



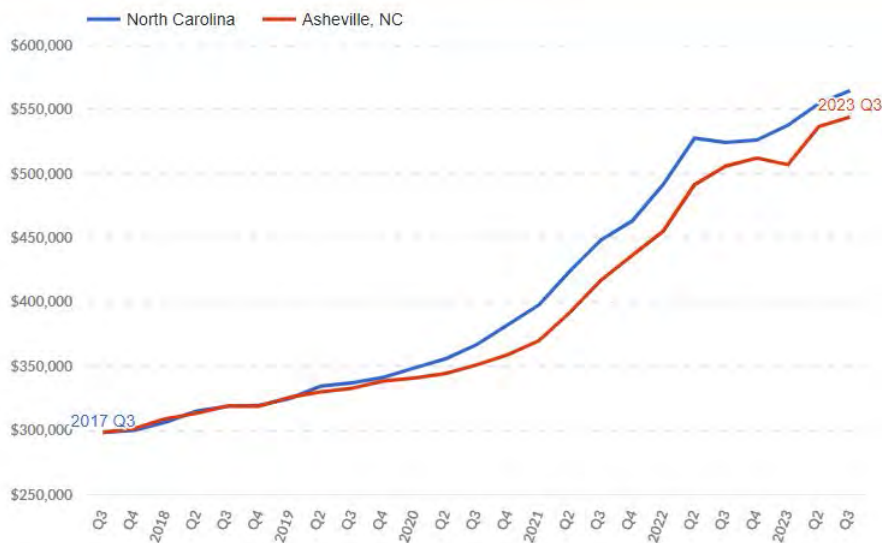
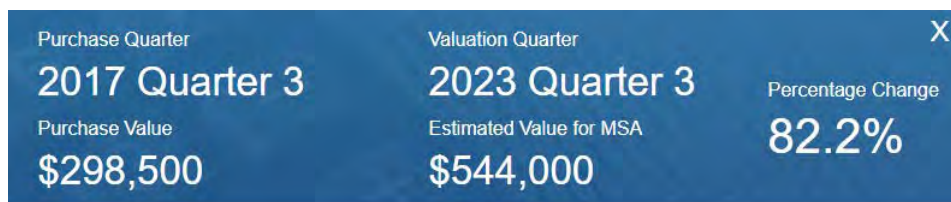
There is a nearby home sale that is located on Tax Parcel 8047 (just below the identifier for Parcel 9). This home is 550 feet from the nearest battery equipment and most of that distance is heavily wooded.

This home has a street address of 95 Forest Lake Drive, Asheville, NC and it sold on April 26, 2022 for \$510,000 for this 4 BR/3 BA ranch with 1,931 square feet including the daylight basement area. The home also has a 2 car garage. I did not attempt a paired sale as this home has no visibility of the BESS despite the proximity and arguably has a better view with less screening to the substation, which is also closer to the home.

Similarly, new homes are being built to the south on Ranglely Drive with prices ranging from \$431,000 to \$566,000. These homes include those that back up to the Parcels 11 through 14 in the adjacent parcel map.

Also, Parcel 4 sold in March of 2022, but it has the substation between it and the BESS, which makes it challenging to draw conclusions from and I attempted no analysis.

I did look at 129 Graham Lane, Asheville, which is adjoining Parcel 11. It sold on November 6, 2023 for \$550,000 for this 4 BR, 3 BA home with 2,913 s.f. with a 2 car garage built in 1970 on a 1.21-acre lot. This home last sold on August 2, 2017 for \$298,500 prior to the BESS being constructed. Adjusting this earlier sale using the Federal Housing Finance Agency Home Price Index over that time period, homes in the area indicate that the home should have appreciated to \$544,000 as shown below. The home actually sold for slightly more than this which supports a finding of no impact on property value. This home was 510 feet from the BESS and was screened.



4 – East Hampton Energy Storage System

This 5 MW battery storage system is located on a parcel with a substation and a natural gas peaker plant. This makes it difficult to use for analysis given the multiple uses on this parcel, but I have included a visual of homes in the general area that have sold recently for reference. There is significant wooded acreage separating this BESS and nearby homes.



5 – Diablo Energy Storage System

This 200 MW battery storage system is located on a parcel with significant adjacency to industrial uses and residential uses. For these reasons it would be difficult to measure impacts due to the adjoining industrial uses that might also have an impact. Given that most of the adjoining uses are industrial, I have not dug further on this one.

6 – Prospect Energy Storage System

This 10 MW battery storage system is located on a parcel adjoining a large substation in Brazoria, TX. The only adjoining home is 400 feet away. This home has not sold since the BESS was completed in 2019. Furthermore, this home has an unobstructed view of the substation which would make it a difficult home for impact analysis.

7 – Brazoria Energy Storage System

This 9.95 MW battery storage system is located on a parcel adjoining multiple homes within 150 feet of the battery equipment. There have been no recent sales since this was built in 2020.



8 - Gambit Energy Storage

This 102.4 MW battery storage system is located off W. Live Oak Street, Angleton, Texas. This is a new facility and placed online in June 2021. This system is a good location as there are no other externalities adjoining it to potentially impact the analysis. The substation associated with this is located to the east along N. Walker Street.



While I cannot do any analysis of impact from the most recent adjoining sales as they all occurred before this site was built, but the adjoining homes to the north are selling with new homes ranging from \$400,000 to \$600,000.

The most recent adjoining home sale to the west was 852 Marshall Road that sold on April 5, 2021 and presumably they were aware of the battery storage facility as it would have been under construction at the time of sale. This brick ranch with 3 BR, 1 BA with 1,220 s.f. of gross living area and built in 1980 on 0.40 acres sold for \$165,000, or \$135 per s.f.

I have compared that sale to 521 Catalpa Street that sold on September 11, 2020 for \$155,000 for a 3 BR, 2 BA brick ranch with 1,220 s.f. built in 1973 with a single car garage. Adjusting this price upward by 9% for growth in the market for time, 3.5% for difference in age, downward by \$6,000 for the additional bathroom, and \$4,000 for the garage, the adjusted indicated value of this home is \$164,375, which is right in line with 852 Marshall Road and supports a finding of no impact on property value.

I have also compared that sale to 521 W Mimosa Street that sold on February 26, 2021 for \$150,000 for this brick ranch with 3 BR, 1.5 BA with 1,194 s.f. built in 1976. Adjusting this sale upward by 4% for growth in the market over time, upward 2% for difference in age, and downward by \$5,000 for the additional half bathroom, I derive an adjusted indication of \$154,000. This is 7% less than the

home price at 852 Marshall Road which suggests an enhancement due to proximity to the battery storage system.

I have also compared this sale to 1164 Thomas Drive that sold on May 20, 2020 for \$187,000 for this brick ranch with 2-car garage, 3 BR, 2 BA with 1,259 s.f. and built in 1998. Adjusting this upward by 13% for growth over time, downward by 9% for difference in age of construction, downward by \$8,000 for the garage, downward \$6,000 for the additional bathroom, I derive an indicated value of \$180,480. This is a 9% difference suggesting a negative impact on property value. However, this comparable required the largest amount of adjustments and is not considered as heavily as the other two comparables. This home is 18 years newer and with better bathroom situation as a 1-bathroom house is a significant issue for most buyers.

The second comparable considered required the least adjustment and suggests a positive impact on property value. The median indication is the first comparable which shows no impact on property value. Given this data set I conclude that the best indication from these matched pairs supports a finding of no impact on property value. The home at 852 Marshall is 180 feet from the project outline shown.

9 - Churchtown Battery Storage

This 10 MW battery storage system is located off N. Broadway, Pennsville, NJ. The aerial imagery does not show this system yet so I was not able to determine distances to adjoining homes or identify any adjoining homes. Given the large substation, adjoining baseball fields and religious facilities this would be a challenging site for an impact analysis in any case.

10 - West Chicago Battery Storage

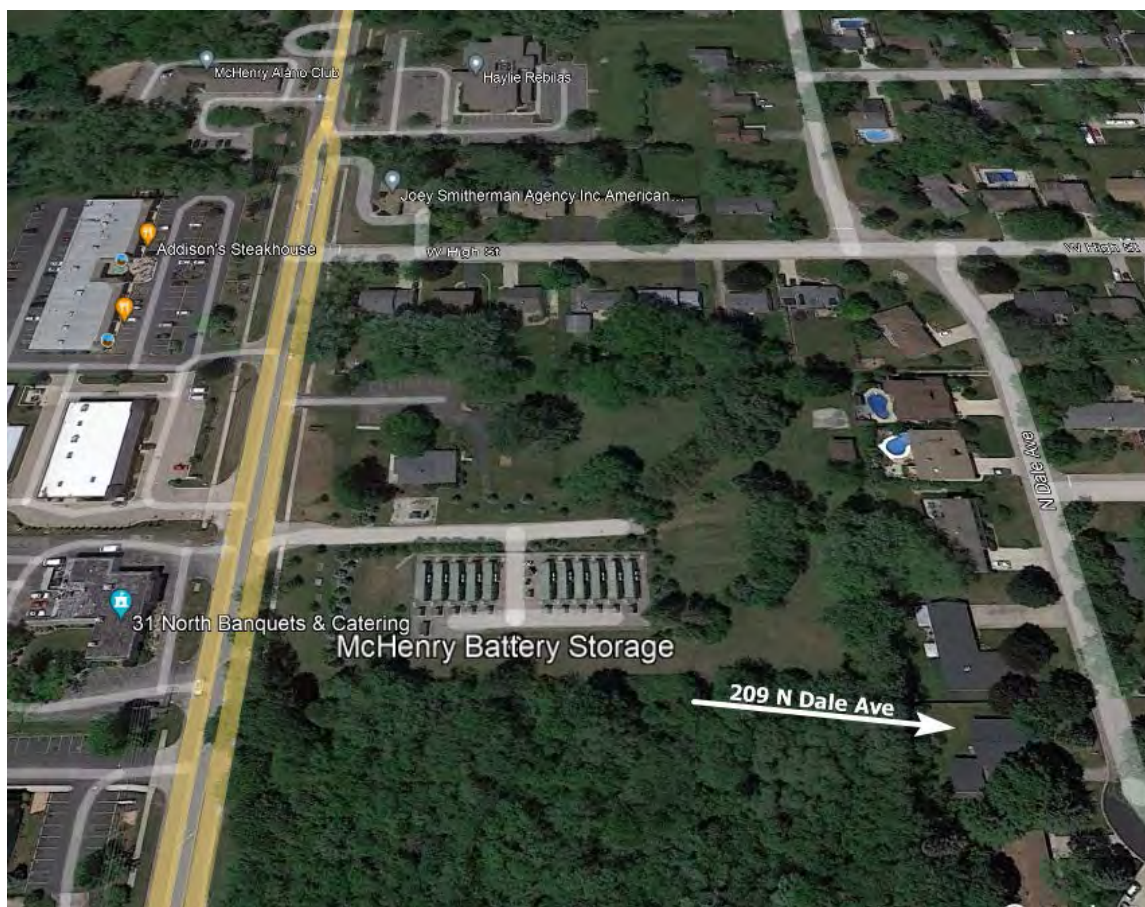
This 19.8 MW battery storage system is located off Pilsen Road, Chicago, Illinois. This facility has condominium and single family housing to the north and single family housing nearby to the south, but also adjoining an outdoor storage area and a large powerline easement. I was not able to do any analysis on this site as there have been no recent sales identified.



11 - McHenry Battery Storage

This 19.8 MW battery storage system is located off Illinois Highway 31, McHenry, Illinois that was built around 2016. This facility fronts on the highway but has rear adjacency to a number of houses.

There were two recent home sales along W. High Street, but they effectively adjoin the small commercial use between the battery storage facility. That complication makes it difficult to determine if the commercial use was the impact or if the commercial use buffered any impact making any finding off of analysis suspect and uncertain.



I have however considered the recent sale of 209 N Dale Avenue that adjoins the battery storage site and is 290 feet from the nearest equipment.

That home sold on June 30, 2021 for \$265,000 for a vinyl-siding ranch with 3 BR, 2.5 BA, built in 1960 with a gross living area of 1,437 square feet, or \$184.41 per s.f. The property has 5 attached garage spaces. As identified in the listing the home was completely renovated with stainless steel appliances and granite countertops. This was listed by Lynda Steidinger with Berkshire Hathaway HomeServices Starck Real Estate and the buyer's agent was Ivette Rodriguez Anderson with Keller Williams. The heavy renovations make it impossible to do a Before and After analysis, so I have looked at paired sales instead.

The home directly across the street, 208 N Dale Avenue, sold on June 16, 2021 for \$275,000 for a cedar siding and stone ranch with 3 BR, 2.5 BA, built in 1961, with a gross living area of 1,446 s.f., or \$190.18 per s.f. This home also has 1,101 square feet of finished basement space that is currently used as an office but could be an additional bedroom. This home also has been updated and includes stainless steel appliances and granite counter tops.

The size difference is nominal and the additional 3-car garage bays at the 209 N Dale is considered to be balanced by the finished basement space at 208 N Dale, though the finished office space is somewhat superior to garage space. But balancing those two factors out the difference in price per square foot is 3%. This is considered negligible and attributable to the slightly superior finished basement space and not any impact relative to the battery storage facility.

I also looked at 3802 Clover Avenue, which is two blocks to the north. This stone and siding ranch with 3 BR, 2 BA, built in 1956, with a gross living area of 1,200 s.f. sold on October 21, 2021 for \$231,000 or \$192.50 per s.f. The property has been updated with a new kitchen and a new bay window and includes a partially finished basement with an additional bathroom in it and the total basement area is an additional 1,200 s.f. This is the smallest home in the neighborhood that I found and it further illustrates that the price per square foot typically goes up as the size goes down. Adjusting this gross sale price upward by \$36,498 for the smaller size based on 80% of the price per square foot for this purchase, I derive an adjusted sales price to compare to the subject property of \$267,498. I consider the basement to balance out the extra garage space at the subject. This indicates a difference of 1% from the purchase price of the 209 N Dale Avenue, which is attributable to the 4 months difference in time. I consider this comparable to further support a finding of no impact on value.

There are numerous recent home sales in the neighborhood ranging from \$172,000 to \$306,000, but most of these homes are also over 2,000 square feet in size. The subject property sold for more per square foot than most of these other sales partly due to the smaller overall size, partly due to the significant renovations, and partly due to the additional garage space. Still, this shows that the 209 N Dale Avenue sale is not being impacted by the battery storage facility and has in fact been updated above what is typical for the neighborhood, though given the similar updates at 208 N Dale Avenue, this may be the trend for the area.

The two sales compared to the 209 N Dale Avenue sale supports a finding of no impact on property value due to the battery storage facility.

I also looked at a more recent sale of 205 N Dale Avenue which adjoins 209 N. Dale to the south. This home sold on May 31, 2023 for \$255,000 for this 3 BR, 2 BA home with 1,592 s.f. with a 2-car garage built in 1962 on a 0.40-acre lot. This home sold earlier that year for significantly less and underwent heavy renovations. The property was advertised as backing up to woods, it is 1 lot off adjacent to the BESS and shows no sign of impact.

12 - Plumsted Energy Storage

This 19.8 MW battery storage system is located on Monmouth Road, Cream Ridge, New Jersey. There is only one adjoining home as shown in the image to the south, but it is located just 148 feet from the nearest piece of equipment and 96 feet from the fence line. There were existing trees, but they were supplemented with a 12-foot wooden privacy fence with smaller evergreens between the fence and property line. The privacy fence at this location is oversized as the battery units include HVAC units on top of the battery pods that extend the height of the units greater than required at the subject property. The road frontage was not landscaped and chain link fencing was used on the rest of the property.

The adjoining home at 797 Monmouth Road has not sold recently and no further analysis is possible at this site.



13 - Vista Energy Storage System

This 40 MW battery storage system is located off Olive Avenue, Vista, California. This facility has significant commercial development around it but also housing to the south as close as 115 feet from the closest equipment as shown in the aerial map below.



14 - Chisholm Grid Energy Storage

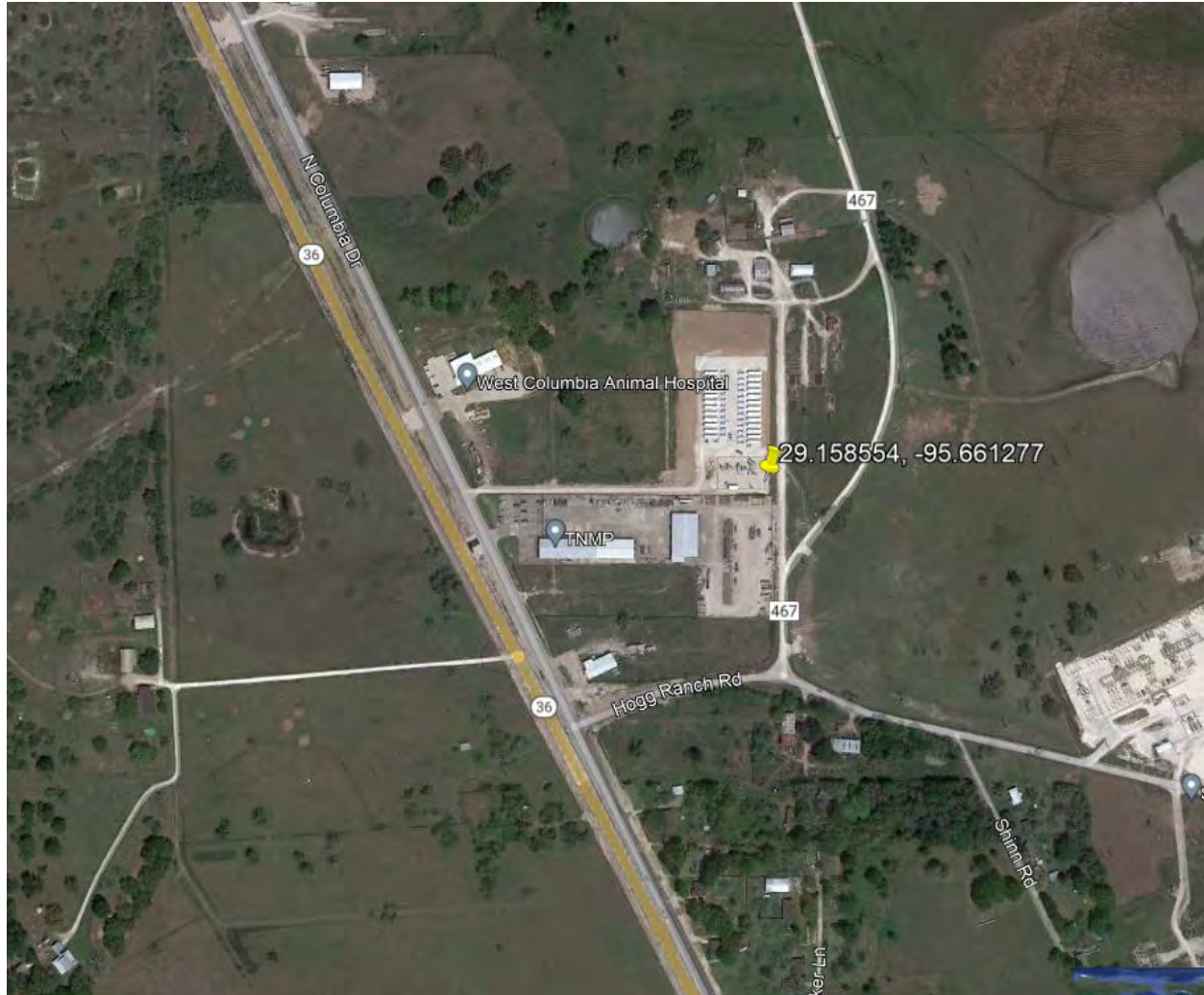
This 200 MW battery storage system is located at 9400 Asphalt Drive, Fort Worth, Texas. This is a new facility and in close proximity to those homes near the substation.

The property to the west of the BESS is an asphalt plant with a lot of vacant land separating the homes from the active plant. Still this complicates any analysis of this from an impact analysis standpoint. I therefore have not attempted to do so.



17 – Roughneck Storage

This 50 MW battery storage system is located off Hogg Ranch Road, West Columbia, Texas. There have not been any adjoining home sales since it was built and commercial/industrial uses in the vicinity would make it challenging for analysis in any case. The closest adjoining home is 1,095 feet from the BESS equipment.



18 – Silicon Hill Storage

This 100 MW battery storage system is located off Cameron Road, Pflugerville, Texas. There have not been any adjoining home sales since it was built so no analysis is currently possible. The closest adjoining home is 350 feet from the BESS equipment.



19 – North Central Valley Energy Storage

This 132 MW battery storage system is located near Stockton California in the San Joaquin Valley. The map below shows the approximate area as this became operational in August 2023 and no aerial imagery of the battery facility was available.



20 – Rush Springs BESS

This 10 MW battery storage system is located near Marlow, Oklahoma. This system is connected to a wind farm with the nearby farm structures shown next door.



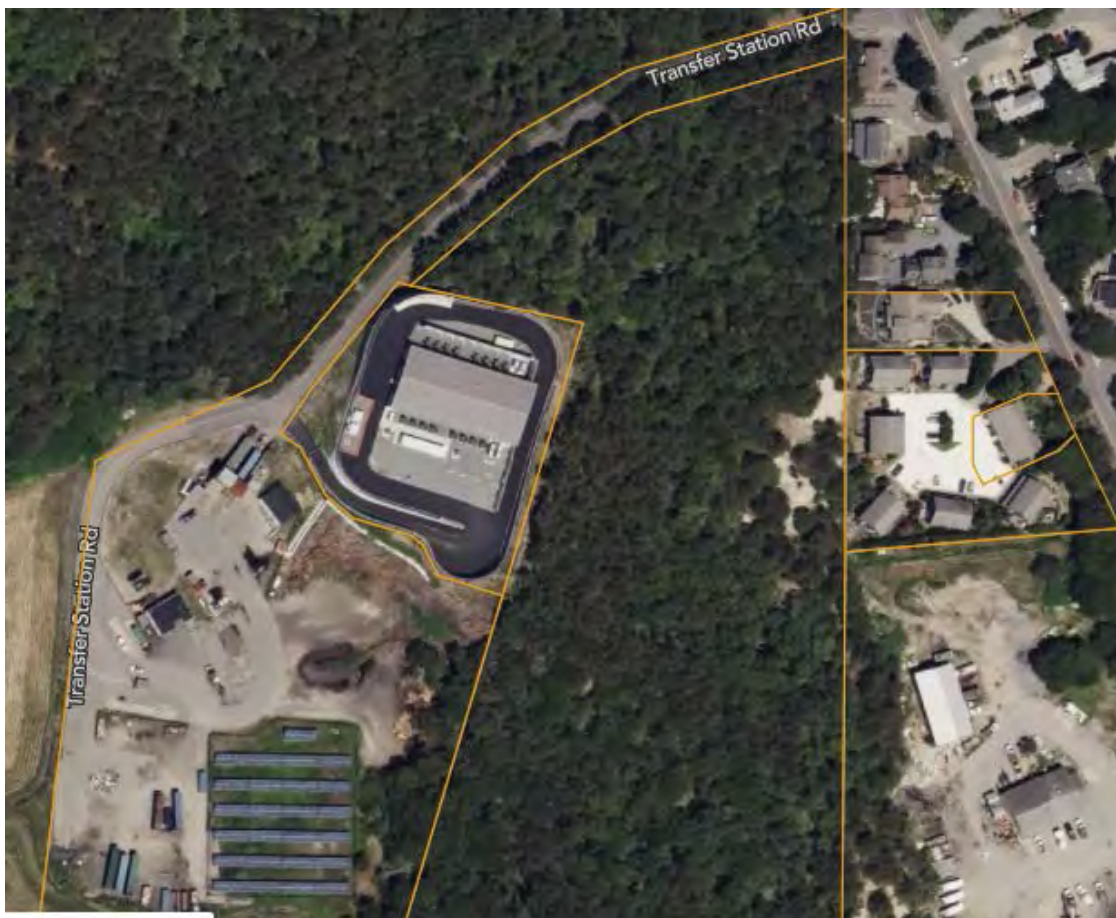
21 – Bat Cave Energy Storage

This 100.5 MW battery storage system is located near Mason, Texas and was built in 2021.



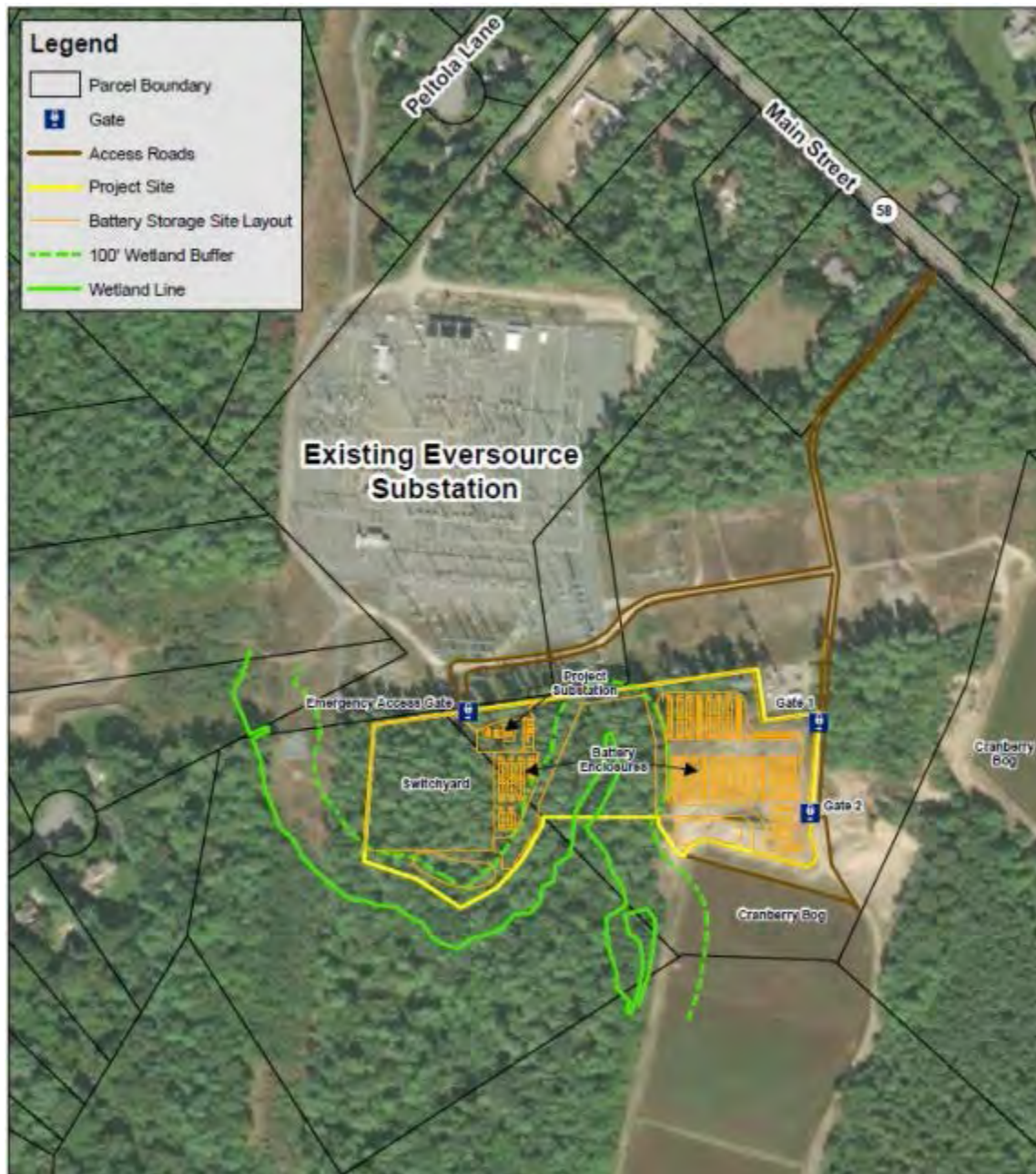
22 – Outer Cape Community

This 25 MW battery storage system is located in Nantucket, Massachusetts. This adjoins an industrial building, small solar farm and small landfill. There are nearby houses to the east as close as 435 feet. The closest home sold on November 28, 2023 after the batteries were put in place for \$1,750,000 for this 2,454 s.f. home. I attempted a paired sales analysis but given the proximity to those other uses it was not possible to isolate those other possible issues from comparable sales. The best way to isolate those issues would be a Sale/Resale analysis of the same home, but the next earliest sale of this home was too far back for a valid Sale/Resale analysis.



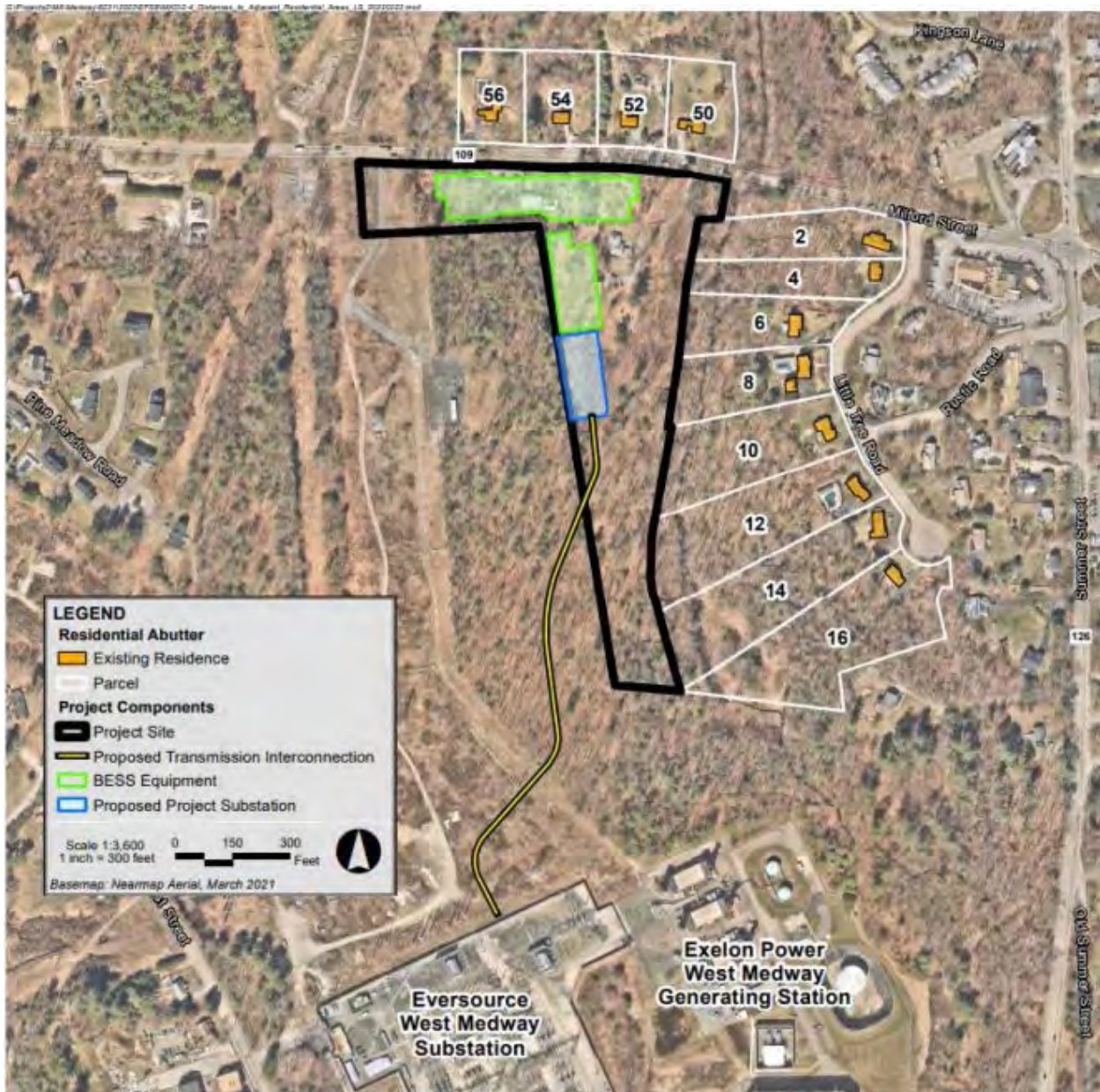
23 – Cranberry Point Energy Storage

This 150 MW battery storage system is proposed for Carver, Massachusetts. This is located on 6 acres out of 34-acre parent tracts. The closest adjoining home will be 680 feet away to the west.



24 – Medway Grid

This 250 MW battery storage system is proposed for Medway, Massachusetts. This is located on a portion of 10.6 acres. The closest adjoining home will be 150 feet away to the north.



25 – Beebe Substation Battery Storage

This 3 MW battery storage system is in Wakefield, Massachusetts built in 2019. The closest adjoining home is 150 feet away to the southwest.

I looked at 4 Twilight Road to the south that is 600 feet away. It sold in September 2023, but that home is closer to a large powerline easement that makes it difficult to complete a paired sales analysis.

I also looked at 22 Pheasant Wood Drive that sold on August 2023 for \$1,050,000 for a 3,038 s.f. brick ranch with 3 BR, 3.5 BA, 2 car garage built in 1992 on 0.33 acres. This home has a finished basement with a full in-law suite with kitchen. The price per square foot works out to \$345.62. This home is 480 feet to the north from the battery system.

I have compared this to 7 June Circle that sold December 2023 for \$1,109,000 for a 3,473 s.f. 2 story home built in 1971 on 0.36 acres. The home has 5 BR, 4.5 BA, 2 car attached garage and 2 car detached garage with finished basement and a pool. The purchase price works out to \$319.32 per s.f. Adjusting this price upward by 10% for the difference in year built, this price is adjusted to \$351.24 per s.f. This is within 1.6% of the Pheasant Wood sale and supports a finding of no impact on value.



Summary

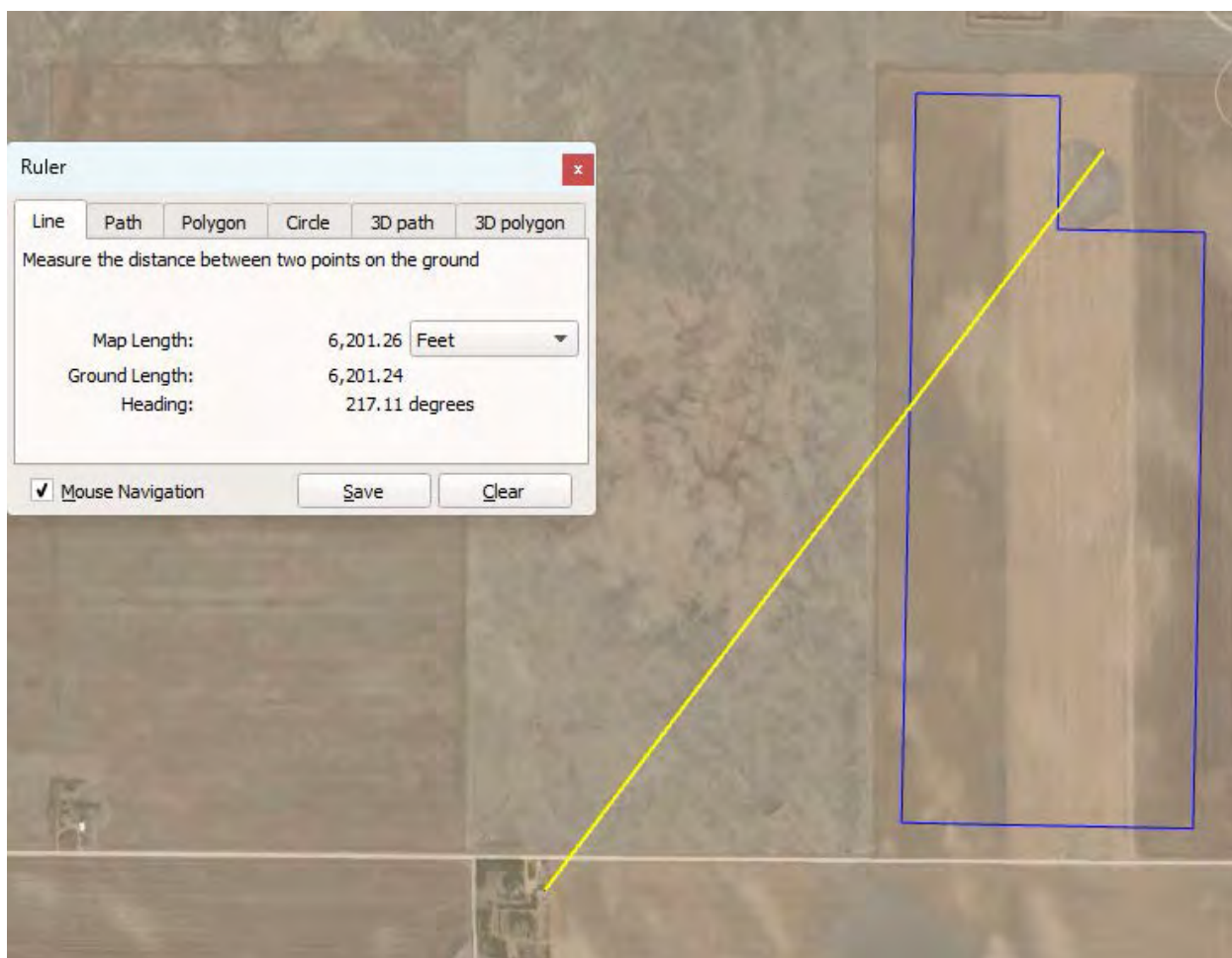
I was able to complete paired sales analysis on four of these situations with data coming from Ozone Park in NY, Asheville in NC, Gambit in TX, McHenry in IL, Beebe, MA.

The paired sales analysis identifies no impact on adjoining properties based on actual home sales adjoining similar projects.

Many of the situations identified showed homes in similar situations to the subject property where there is a large substation and powerlines nearby with no impact attributable to the inclusion of the BESS.

The sales data supports a finding of no impact on property value for homes ranging from 180 to 530 feet from the nearest equipment with a median distance of 345 feet.

The closest home at the proposed facility is substantially further away over 6,200 feet away based on an estimated measurement using GoogleEarth shown below.



I therefore conclude that the BESS component will have no negative impact on nearby property values.

XVIII. Certification

I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct;
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions;
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved;
4. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment;
5. My engagement in this assignment was not contingent upon developing or reporting predetermined results;
6. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of the appraisal;
7. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute;
8. My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives;
10. I have not made a personal inspection of the property that is the subject of this report, and;
11. No one provided significant real property appraisal assistance to the person signing this certification.
12. As of the date of this report I have completed the continuing education program for Designated Members of the Appraisal Institute;
13. I have not completed any other appraisal related assignments regarding this project within the three years prior to engagement in this current assignment.

Disclosure of the contents of this appraisal report is governed by the bylaws and regulations of the Appraisal Institute and the National Association of Realtors.

Neither all nor any part of the contents of this appraisal report shall be disseminated to the public through advertising media, public relations media, news media, or any other public means of communications without the prior written consent and approval of the undersigned.




Richard C. Kirkland, Jr., MAI
State Certified General Appraiser



Kirkland Appraisals, LLC

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PROFESSIONAL EXPERIENCE

Kirkland Appraisals, LLC , Raleigh, N.C. Commercial appraiser	2003 – Present
Hester & Company , Raleigh, N.C. Commercial appraiser	1996 – 2003

PROFESSIONAL AFFILIATIONS

MAI (Member, Appraisal Institute) designation #11796	2001
NC State Certified General Appraiser # A4359	1999
VA State Certified General Appraiser # 4001017291	
SC State Certified General Appraiser # 6209	
KY State Certified General Appraiser # 5522	
TN State Certified General Appraiser # 6240	
FL State Certified General Appraiser # RZ3950	
GA State Certified General Appraiser # 321885	
MI State Certified General Appraiser # 1201076620	
PA State Certified General Appraiser # GA004598	
OH State Certified General Appraiser # 2021008689	
IN State Certified General Appraiser # CG42100052	
IL State Certified General Appraiser # 553.002633	
LA State Certified General Appraiser # APR.05049-CGA	

EDUCATION

Bachelor of Arts in English , University of North Carolina, Chapel Hill	1993
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CONTINUING EDUCATION

Uniform Standards of Professional Appraisal Practice Update	2024
ASFMRA Integrated Approaches to Value (A360)	2024
ASFMRA Best in Business Ethics	2023
Appraising Natural Resources Series – Oil, Gas & Minerals	2023
Appraisal of Industrial and Flex Buildings	2023
Commercial Land Valuation	2023
Fair Housing, Bias and Discrimination	2023
Pennsylvania State Mandated Law for Appraisers	2023
What NOT to Do (NCDOT Course)	2023
The Income Approach – A Scope of Work Decision	2023
Valuation of Residential Solar	2022
Introduction to Commercial Appraisal Review	2022
Residential Property Measurement and ANSI	2022
Business Practices and Ethics	2022

Uniform Standards of Professional Appraisal Practice Update	2022
Sexual Harassment Prevention Training	2021
Appraisal of Land Subject to Ground Leases	2021
Michigan Appraisal Law	2020
Uniform Standards of Professional Appraisal Practice Update	2020
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book)	2019
The Cost Approach	2019
Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012
Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011
Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update	2011
Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004
Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999

Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997
Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996