

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE KENTUCKY STATE BOARD ON**  
**ELECTRIC GENERATION AND TRANSMISSION SITING**

IN THE MATTER OF:

THE ELECTRONIC APPLICATION OF	)	
SEBREE SOLAR, LLC FOR A CERTIFICATE	)	
TO CONSTRUCT AN APPROXIMATELY 250	)	
MEGAWATT MERCHANT SOLAR ELECTRIC	)	CASE NO. 2021-00072
GENERATING FACILITY IN HENDERSON	)	
COUNTY, KENTUCKY PURSUANT TO	)	
KRS 278.700, ET SEQ. AND 807 KAR 5:110	)	

---

**SEBREE SOLAR LLC'S**  
**RESPONSE TO SITING BOARD CONSULTANT'S REPORT**

---

Comes now Sebree Solar LLC (“Sebree Solar” or “Applicant”), by counsel, pursuant to the Siting Board’s September 21, 2021 procedural order, and does hereby respectfully tender its response to the “Solar Generation Siting Final Report – Sebree Solar”, dated November 24, 2021, prepared by Wells Engineering, PSC (the “Wells Report”), respectfully stating as follows:

Section 4 - Recommendations & Mitigations Measures

- 1. Create a Site Survey Map indicating the property boundaries. This will be a good reference for current and future needs of the project.*

Sebree Solar agrees with this recommendation. The field work for this survey has been completed and the final surveyed map is pending final title commitment / review. This will be used as the basis for detailed design and engineering.

- 2. Improve the reliability of the Power Generation, as discussed in section 3.4.*

Sebree Solar is currently in the preliminary engineering phase for our collector substation and transmission line. As we progress design, we will review our transformer design and may add an additional unit based on the short circuit current levels. Our preliminary design for the transmission line is a single circuit rated for 400MW.

- 3. Review and update the property ownership records.*

Sebree Solar understands this to mean that the Project should review the participating property ownership and make note of any changes since the original leases / purchase options were signed. In that respect, Sebree Solar agrees with this recommendation.

- 4. Provide Site access control as per KRS, FERC, & NERC guidelines.*

Sebree Solar agrees with this recommendation.

- 5. For locating the Solar Modules and Other associated equipment of the plant maintain sufficient clearance from the existing power lines adhering to NEC, NESC & OSHA*

Sebree Solar agrees with this recommendation.

- 6. Adhere to the setback distance at all locations as per guidelines from the local planning zone authority.*

Sebree Solar agrees with this recommendation.

- 7. Setbacks for solar equipment from roads and property lines, with increased setbacks for certain equipment. Security fencing, vegetative buffer and pollinator plantings shall not be subject to setback restrictions.*

Sebree Solar agrees with this recommendation.

8. *Leaving existing vegetation between solar equipment and neighboring residences in place, to the extent practicable, to help screen the Project and reduce visual impact*

Sebree Solar agrees with this recommendation.

9. *Notices to neighbors regarding potential construction and operation noises, as well as limits on working hours during the construction period, as described in the Application.*

As stated in the Sebree Solar Response to Siting Board Staff First Request, planned noise mitigation will include notification of residents and businesses in the vicinity of the proposed Project about the start of construction and potential construction noises at least a month prior to commencing Project construction. These notifications will include contact information for receiving complaints. In addition, construction activities will be limited to daytime construction between 6 AM and 6 PM.

10. *Coarse (bigger) particles, called PM10, can irritate your eyes, nose, and throat. Dust from roads, farms, dry riverbeds, construction sites, and mines are types of PM10. The applicant will submit in writing the specific plan to control fugitive dust and PM 10 during the construction process ten days prior to commencing construction.*

Sebree Solar agrees with this recommendation.

11. *Ten days prior to the commencement of construction, the Applicant will provide a detailed plan on how they will protect water resources in the project area. The site assessment documents in several locations say that certain mitigation measures regarding erosion and protection of water resources “may” be carried out. This needs to be clearly specified. The primary focus should be on preventing turbidity being added to local streams as a result of erosion during construction.*

Sebree Solar will protect water resources on site from erosion and sedimentation during construction by seeking coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges (KYR100000). The KPDES permit requires

development of a Stormwater Pollution Prevention Plan (SWPPP) that will be implemented at the commencement of the construction disturbance. The SWPPP shall include erosion prevention measures, sediment controls measures, buffer zones and other site management practices necessary to prevent the discharge of sediment and other pollutants into waters of the Commonwealth that would result in those waters being degraded or non-supportive of their designated uses.

Sebree Solar will submit a Notice of Intent (NOI) to the KY Division of Water a minimum of seven days before the proposed date for commencement of construction activities in order to obtain coverage under this KPDES General Permit.

#### Property Values

Although not included within the recommended mitigation measures set forth in the Wells report, Sebree would like to address certain assertions in Attachment D of the Wells Report regarding the impact of solar projects upon nearby property values. The Property Value Impact Study prepared by CohnReznick on behalf of Sebree Solar used well established methodologies in their research, which was completed by credentialed professionals, one of which is licensed in Kentucky. The Project does not agree with the conclusions set forth in Attachment D to the Wells Report. Please see attached to this document a letter by CohnReznick specifically addressing the concerns in Attachment D to the Wells Report regarding the Property Value Impact Study.

This 3<sup>rd</sup> day of December, 2021.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'D.S. Samford', written over a horizontal line.

David S. Samford  
L. Allyson Honaker  
GOSS SAMFORD, PLLC  
2365 Harrodsburg Road, Suite B-325  
Lexington, KY 40504  
(859) 368-7740  
david@gosssamfordlaw.com  
allyson@gosssamfordlaw.com

*Counsel for Sebree Solar LLC*



December 3, 2021

Ms. Lina Jensen  
Project Director  
NextEra Energy Resources  
700 Universe Blvd  
Mail Stop E5E  
Juno Beach, Florida 33408

RE: Wells Engineering/Clay Review Rebuttal  
Proposed Sebree Solar Project  
Henderson County, Kentucky

This letter serves as a response to the Wells Engineering review of the Proposed Solar Project's Application documents (and the Site assessment report as per the Kentucky Revised Statutes KRS 278.706, KRS 278.708 & KRS 278.714) and Final report on the Solar Generation Siting for the application for a construction certificate by Sebree Solar LLC in Henderson & Webster Counties, KY. This includes a formal review prepared by Mary McClinton Clay, MAI.

Wells Engineering requested Mary McClinton Clay, MAI to review the property-value report submitted in the Site Assessment Report and prepared by CohnReznick. After a review of Ms. Clay's discussion, Wells Engineering concluded that "...it can be presumed based on the practical observation and the studies done by the applicants of other Solar Projects in Kentucky, situated in similar rural environments, the impact on property values were negligible."

Wells Engineering had previously indicated in public filings that their own experts did not believe Utility-Scale solar projects would have an adverse impact on property values. As noted:

In order to establish a third point of reference we asked our environmental engineer, Mr. Tom Chaney, to consider the impact on valuation. Concerning the loss of valuation due to the change in viewshed he writes the following: "Based on the data and analysis in [*the Kirkland Consulting Report*], it is the professional opinion of the author that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting property and that the proposed use is in harmony with the area in which it is located. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms 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's quiet, and there is no traffic."  
(Horseshoe Bend Solar – Wells Siting Report)

The above should help clarify a distinction that Wells Engineering does not appear to concur with the Clay Review findings.



CohnReznick is an independent  
member of Nexia International

CohnReznick LLP | 200 South Wacker Drive | Suite 2600 | Chicago, IL 60606-5829  
Main: 312.508.5900 | Fax: 312.508.5901 | [cohnreznick.com](http://cohnreznick.com)

Specifically, we would like to address some of the inconsistencies in the Clay Review and provide some additional information if worthwhile to the application and review, as it relates to the following:

- USPAP
- Methodology
- Literature Review
- Peers in the Field
- CohnReznick Affiliates
- Omission of Adjacent Properties
- Omission of HVTL Easement
- Additional Clay's Opinions

### **USPAP**

The Clay Review notes that the property fails to follow USPAP. The Property Values Impact Study report is not a conventional appraisal and is consistent with the definition of a consulting assignment, which falls under USPAP guidelines for Appraisal Practice as a valuation service and is not subject to Standards 1 and 2 of USPAP. It is only subject to the Competency, Ethics, and Jurisdictional Exception Rules. Reference to other sections of USPAP that do not apply is immaterial.

Patricia McGarr, MAI, CRE, FRICS & Andrew Lines, MAI & Sonia Singh, MAI (who all worked on the impact studies) are bound not only by their designations with the Appraisal Institute, but also by their Certified General Appraisal Licenses with the state and by the Uniform Standards of Professional Appraisal Practice (USPAP) to hold themselves completely independent of the subject matter and confirm they have no personal or financial interest in the project proposed before the County.

### **METHODOLOGY**

The purpose of the Property Values Impact Study report was to determine whether proximity to the solar facility resulted in any measurable and consistent impact on adjacent property values. To test this hypothesis, CohnReznick identified three relevant techniques to test if a detrimental condition exists.

- (1) A review of published studies;
- (2) Paired sale analysis of properties adjacent to existing solar generating facilities, which may include repeat sale analyses or "Before and After" analyses; and,
- (3) Interviews with real estate professionals and local real estate assessors.

The paired sales analysis is an effective method of determining if there is a detrimental impact on surrounding properties, as noted in the Bell, PhD textbook Real Estate Damages (Third Edition, 2016).



*“One of the most useful applications of the sales comparison approach is paired sale analysis. This type of analysis may compare the subject property or similarly impacted properties called **Test Areas** (at Points B, C, D, E, or F) with unimpaired properties called **Control Areas** (Point A). A comparison may also be made between the unimpaired value of the subject property before and after the discovery of a detrimental condition. If a legitimate detrimental condition exists, there will likely be a **measurable and consistent difference** between the two sets of market data; if not, there will likely be no significant difference between the two sets of data. This process involves the study of a group of sales with a detrimental condition, which are then compared to a group of otherwise similar sales without the detrimental condition.”* (Bell, *Real Estate Damages*, p 33)

**As an approved method**, paired sales analysis can be utilized to extract the effect of a single characteristic on value. By definition, paired data analysis is “a quantitative technique used to identify and measure adjustments to the sale prices or rents of comparable properties; to apply this technique, sales or rental data on nearly identical properties is analyzed to isolate a single characteristic’s effect on value or rent.”

In the example provided by Dr. Bell in his report, provides a demonstrative example, with five sales with a detrimental condition in the test area compared to multiple sales in the control areas to determine a difference. Specifically, he measures one test sale at a time *to the average* of multiple control sales and extracts a differential (in percentage) based on each comparison. An exhibit is contained within the textbook, as follows:

**Exhibit 1.7** Paired Sales

	Test Area with Detrimental Condition	Control Area with No Detrimental Condition			Indication from Control Area Comparables	% Loss
		Sale 1	Sale 2	Sale 3		
Property 1	\$495,000	\$600,000	\$585,000	\$580,000	\$588,000	15.8%
Property 2	\$525,000	\$590,000	\$605,000	\$575,000	\$590,000	11.0%
Property 3	\$490,000	\$570,000		\$600,000	\$585,000	16.2%
Property 4	\$505,000	\$580,000		\$605,000	\$592,500	14.8%
Property 5	\$485,000			\$590,000	\$590,000	17.8%

1. *The Appraisal of Real Estate*, 14th ed. (Chicago: Appraisal Institute, 2013), 30.

This methodology is reproduced in the Property Values Impact Study report based on differences in unit prices, where a test sale (or sales) were measured against a control group of sales.



In addition, where data was available, CohnReznick also prepared “Before and After” analyses or a Repeat Sale Analysis, to determine if a detrimental impact has occurred. This is described by Bell as a Sale/Resale Analysis (Bell, p. 35). Again, CohnReznick follows the methodology as laid out in the textbook.

In addition, by plotting the distance between test sales and control sales to the actual solar farms themselves CohnReznick also provided an analysis described by Bell as a Proximity Study; and based on the impact study of Dominion Indy Solar II CohnReznick also prepared an analysis described by Bell as a Neighborhood Analysis, given the higher number of transactions of nearly identical housing.

As noted above, the methodology utilized by CohnReznick is appropriate and supported. The Clay Review assertion that the “[CohnReznick’s] methodology of only analyzing one or more paired sales for each of the 10 solar farms in their survey is inadequate to form an opinion as to whether there is diminution of value or not” while simultaneously citing Real Estate Damages by Bell is inconsistent and confusing. It is unreasonable to state that the studies were conducted inappropriately when we have exactly replicated the methodology stated in Dr. Bell’s treatise.

Further, the Clay Review indicates a need for “discussion of damage study theory and methodology.” In the Third Edition of Real Estate Damages, by Dr. Bell, the words “Damage Study Theory” appears no where together in the entire text. For perspective, and not contained in the Clay Review, there are multiple methodologies to deploy by an appraiser to measure impact including:

- ***Paired Sales Analysis***
- Impaired Sales Comparables
- Market Resistance Estimation
- ***Sale/Resale Analysis***
- ***Neighborhood Studies***
- ***Proximity Studies***
- ***Statistical Studies (Such as Multiple Regression)***
- ***Market Interviews and Surveys***

CohnReznick utilized Paired Sales Analysis, Sale/Resale Analysis, Neighborhood & Proximity study, market interviews, and also reviewed and analyzed two different multiple regression studies (URI and GIT) that included hundreds of thousands of sales. To suggest that CohnReznick did not apply Bell’s methodology is factually incorrect.

## **LITERATURE REVIEW**

The Clay Review misrepresents the findings and conclusions of the University of Texas Study (May 2018), specifically, the Review ignores the Study’s conclusion indicating a desire for future research on home sales data “to collect empirical evidence of actual property value impacts.” Rather, the Clay Review focuses on the very limited number of assessors who surmised an impact without seeing any relative transactional data.

The portion of the study focusing on property impact was an Opinion Survey of Assessors with no sales data or evidence included in the survey. The opinion survey was sent to 400 assessors nationwide and received *only 37 responses*. Of those 37 assessors, only 18 had assessed a home near a utility-scale solar installation, the remainder had not. Of the 18 assessors with experience in valuing homes near solar farms, 17 had not found any impact on home values near solar. A small number of those assessor respondents hypothetically surmised an impact, but none had evidence to support such statements.

The author states on the last line of page 22: “Finally, ***to shift from perceived to actual property value impacts, future research can conduct analyses on home sales data to collect empirical evidence of actual property value impacts.***” It should be noted that the type of statistical analysis that the author states is required to determine “actual property value impacts” was completed two years later by the following Academic Studies: the University of Rhode Island (Lang) study including 284 solar facilities and 419,258 actual home sales; and the Georgia Institute of Technology (Abashidze) study including 299 solar installations, and 1,676 farmland sale transactions.

The Clay Review also misrepresents the findings and conclusions of the University of Rhode Island, when it notes, “This study, which is based on hundreds of thousands of transactions, unequivocally has determined that [Solar Facilities] negatively affect nearby property values...”

The study utilized a hedonic pricing model, or multiple regression analysis, to quantify the effect of proximity on property values due to solar by studying existing solar installations in Massachusetts and Rhode Island. The study evaluated 208 solar facilities, 71,373 housing sales occurring within one-mile of the solar facilities (Test Group), and 343,921 sales between one-to-three miles (Control Group). Because it is a hedonic regression model, it allowed them to isolate specific variables that could impact value, **including isolating rural and non-rural locations.** The study defines “Rural,” as an area having a “population density of 850 people per square mile or fewer.”

The study provides data which found no negative impact to residential homes near solar arrays in rural areas: “these results suggest that [the Test Area] in rural areas ***is effectively zero*** (a statistically insignificant 0.1%), and that the negative externalities of solar arrays are only occurring in non-rural areas.” Further, the study tested to determine if the size of the installation impacted values, and found “no evidence of differential property values impacts by the solar installation’s size.”

Thus, not only are there no impacts to homes in similar areas as the proposed Project, but any differences in the size of a solar farm are similarly not demonstrating an impact. The Clay Review only remarks on points that support a negative conclusion and is mute in explaining the nominal 1.7% that was exclusively related to Suburban/Urban areas (which are not consistent with the Rural property in the application) in the final basis of conclusion of the URI report.

Most importantly, there is a third published study prepared by Dr. Nino Abashidze, School of Economics, Georgia Institute of Technology, dated October 20, 2020, entitled “Utility Scale Solar



Farms and Agricultural Land Values.” Abashidze examined 451 solar farms in North Carolina. “Across many samples and specifications, we find no direct negative or positive spillover effect of a solar farm construction on nearby agricultural land values. Although there are no direct effects of solar farms on nearby agricultural land values, we do find evidence that suggests construction of a solar farm may create a small, *positive*, option-value for land owners that is capitalized into land prices. **Specifically, after construction of a nearby solar farm, we find that agricultural land that is also located near transmission infrastructure may increase modestly in value.**”

The Clay Review has no information regarding this study, rather, the Clay Review gives weight to two studies that were conducted by two appraisers: Fred Beck, MAI and Mark Heckman.

Fred H. Beck and Associates, LLC documented a cancelled sales contract as an example of a negative impact. Mr. Beck has since indicated - as documented in a report by Christian P. Kaila, MAI, SRA (on December 28, 2018 for the Spotsylvania County Solar Project) that Mr. Beck indicated that **if there was landscaping to be around the proposed project then he would not see any drop in property value.** At the time the contract fell through it was believed the home would be in full view of the solar farm, with no screening or landscaping.

As Mr. Kalia continued in his report, “In fact, Mr. Beck concluded no effect on moderate priced homes values, and only a 5% change in his limited research of higher priced homes. His one sale that fell through is hardly a reliable sample. It also was misleading on Mr. Beck’s part to report the lower re-assessments since the primary cause of the re-assessments were based on the County Official, who lived adjacent to the solar farm, requested the assessor for reductions with his own home. Therefore, it appears the only evidence provided by those opposed to solar farms because of claims of lower property values are unsupported and lack real evidence.”

Given that Mr. Beck refuted his own claim, this does not appear to be a reliable indicator of negative values.

The Heckman analysis cited in the Clay Review also has substantial issues that were not made known in the Review Report. CohnReznick replicated the Heckman study and found numerous errors and mistakes that when corrected pointed to zero percent difference based on “view.” This included leaving test sales in the control group, failure to remove duplicative data, failure to remove non-market transactions, and utilization of inappropriate data points. Based on Heckman’s own testimony, this was the only impact study he had ever conducted and was the only study he used to form the basis of his opinion – an opinion based on false pretenses and poor reconciliation of data. Heckman is not an MAI, was largely unfamiliar with Bell’s methodology, and thought that impact studies were “child’s play.” The complete analysis of his study is attached to this letter as an addendum, which completely debunks his claim of any negative impact.

**Given the above, the Clay Review should not have relied on either of these two appraiser’s work as they were both impeached. It is inappropriate to compare the CohnReznick analysis to either of these informal and poorly constructed analyses. Finally, we, as appraisers, are concerned regarding the Clay Review’s reliance on “widely circulated studies” that are not first analyze and determine to be credible.**



## PEERS IN THE FIELD

The literature review provided by Ms. Clay also does not consider any of the very many solar impact assessments that conclude no impact on value such as those completed by Richard Kirkland, MAI, of Kirkland Appraisals, Christian P. Kaila, MAI, SRA, Donald Fisher, ARA, with Pomeroy Appraisers, and Kern G. Slucter, with Gannon Group. By only focusing on studies that show negative impacts and excluding any reference to the many studies showing no impacts the Clay Review presents a biased review of the subject matter.

## COHNREZNICK AFFILIATES

CohnReznick, LLP is a leading Audit, Tax and Advisory firm with thousands of employees around the work in a wide variety of industries. All the services performed in other industries completely dwarf the amount of work this firm does in the renewable energy space (+/-4% of total revenue). Further, the firm is energy agnostic: we also perform audit, tax, and advisory services for traditional Oil & Gas companies.

CohnReznick Capital, LLP is a separate entity that is affiliated with CohnReznick LLP, but entirely separate from the Valuation Advisory Services Group. The Partners in the CR Capital, LLP are not Partners in CohnReznick, LLP. Revenue from the affiliate to CohnReznick LLP is "less than 1%" nominal at best and does not have any bearing on the day-to-day operations of CohnReznick, LLP – the accounting firm.

Our services to provide impact studies are performed without any review, comments, or input from anyone at CR Capital; further, I nor anyone on the appraisal team has a list of any clients of the capital group – we could not tell you who, if anyone, has elected to use their services.

## OMMISSION OF ADJACENT PROPERTY

The Clay Review criticizes the CohnReznick report for the "lack [of] a description of the adjacent properties to the [proposed] solar farm." The purpose of the report was not to appraise every parcel in the Project Area or even the Project Area itself. The purpose, as clearly stated, was to determine whether proximity to an existing solar farm resulted in any significant measurable and consistent impact on adjacent property values, given the existing uses and zoning of nearby property at the time of development; the Proposed Subject area does not have solar, therefore while we have provided some information on the surrounding area, soils information, and median demographic and home price information – it is the study of existing solar facilities that is the driver of the report. The majority of the solar facility studies were in rural areas, including areas of residential homes and were most similar to the proposed solar facility location.

## OMMISSION OF TRANSMISSION CORRIDOR EASEMENT

The Clay review similarly criticizes the CohnReznick report for not addressing a 4.85 mile 161 kV transmission line easement that will link the solar facility to the existing Reid substation, which traverses 20.0 tracts. Further, the Clay Review provided cursory data on High Voltage

Transmission Lines (HVLT) that according to Clay, “have been documented to adversely affect proximate property values.”

First, the proposed development would not be up for submission if it weren’t previously identified as a place for interconnection. This means, there are already transmission lines in the general area. Land for new infrastructure would need to be acquired through sale, lease or easement.

Second, given its large size, some crossing of smaller transmission lines will be necessary to connect to the larger grid. According to Wells Engineering’s sub-contract, Cloverleaf, in the Siting Application Review, “The consultant, W. Thomas C. Haney, visited the Proposed 4.5 mile long Transmission Line Project Area on October 15 and 16, 2021. Based on that, as stated in the responses to the RFIs, first set, the applicant has done a good job of routing the line in terms of the impact on the view sheds around the proposed line. Additionally, due to the agricultural character of the project area, the thoughtful placement of the line and building rapport with landowners, the permanent impact of the project on the natural environment will be limited to minor visual impacts.”

Third and most important, the creation of HVTLs does not necessarily create a negative impact to adjacent property. The Clay Review’s information regarding property values and transmission lines is dated and misinformed; it is deficient in providing the most relevant and up to date information regarding powerlines, as follows:

- 1) ***The Effects of Electric Transmission Lines on Property Values: A Literature Review*** (Appraisal Journal, Thomas and Pitts, 2010) reviewed several studies from 1964 through 2009. Their conclusion was that most studies found no effect and in some cases a premium was observed.

“All of these studies have been published and deal with empirical data, either survey-based data or actual real estate sales data. Excluded were publications that reviewed other studies, publications not based on the direct analysis of data, conference papers, and industry reports. The studies reviewed, while having some inconsistencies in their detailed results, *generally pointed to small or no effects on sales price due to the presence of electric transmission lines.* Some studies found an effect but this effect generally dissipated with time and distance. The effects that were found ranged from approximately 2% to 9%. Most studies found no effect and in some cases a premium was observed. This was attributed to the additional open area usually behind the residence created by the transmission line easement. These relatively small effects are somewhat in contrast to concerns and adverse perceptions expressed in the surveys reviewed here. To put this in perspective, Kinnard and Dickey (1995) authors note that the regression-based sales price analyses ‘*reflect what buyers and sellers actually do, opposed to what potential buyers say they might do, under specified hypothetical circumstances.*’ Citing a court case, they also note that “fear (whether reasonable or not) is admissible as an explanation of why diminution in property value has occurred. It is not a measure of the diminution in market value.”

- 2) ***The Effects of High-Voltage Overhead Transmission Lines on Property Values: A Review of the Literature Since 2010*** (Andersen, MAI, Williamson, PhD, and Wohl,

Appraisal Journal, Summer 2017) reviewed several studies from 2010 through 2016. Their conclusion was that recent studies remained consistent with the studies prior to 2010.

“Nevertheless, the most recent conclusions remain the consistent with the literature before 2010. Survey-based research finds adverse perceptions and general dislike for HVOTLs, but sales data reveals little to no diminution in prices. Stated preferences by market participants in this case generally do not translate into noticeable price effects as revealed in market data.”

- 3) ***High-Voltage Transmission Lines and Residential Property Values In New England: What Has Been Learned*** (Chalmers, Appraisal Journal, Fall 2019) summarizes a ten year project and major regression analysis study and literature review, and surmises that case studies continue to find no evidence of negative impacts as caused by HVOTLs.

“There has been a continuing effort by appraisers and real estate economists to use statistical techniques to answer the question of whether HVTLs affect residential property values. Depending on the geographic area of interest, there may be useful research that can help answer that question. In the case of Massachusetts and Connecticut, there are no 12 study areas that have been investigated with the uniform result of no statistically significant proximity, visibility, or encumbrance effects.”

“Based on the multiple regression analysis, there is no statistically significant evidence in the 12 urban and suburban neighborhoods studied in Massachusetts and Connecticut of consistent, measurable adverse effects of HVTLs on the market value of nearby residential properties.”

Despite the Clay Review claims that HVLs (or HVOLs) negatively impact property values, the literature documented above clearly disputes that theory. Moreover, it is very unusual that the third cited reference above is also cited within the Clay Review Report, although it in of itself impeaches the Clay Review opinion. It appears that the Clay Review is “cherry-picking” statements out of the study and ignoring its conclusions.

## OTHER CLAY OPINIONS

The Clay Review operates on an assumption that only properties in areas that “expect” a scenic view should be studied; however, this also assumes that all relative views from any home are scenic and that the corresponding contributory value to the overall value is significant. For properties that might have views of public lands (mountains, lakes, monuments, etc.) this makes a lot of sense and there are a number of studies to support this. However, for property that adjoins other private property, no one should acquire a home based on the premise that the pre-existing view over someone else's property would remain into perpetuity. Further, most homebuyers have other major considerations that come into play: school district, proximity to family, size and number of bedrooms, interior finishes, age of mechanicals, etc. The point is that while viewshed may be something a buyer considers, it may be well down the list of priorities that are needed to



agree to buy a property. In fact, when correcting the previously described Heckman impact study on measuring viewshed as an amenity, the actual price differential between homes with and without a “view” was zero percent. This is why the perception of some residents with regards to solar facilities may appear to be more negative than the actual sales data indicates.

The concept of perception and its impact on real estate transactions is important to understand. As indicated in the previous excerpts from HVLTs, while “fear (whether reasonable or not) is admissible as an explanation of why diminution in property value has occurred. It is not a measure of the diminution in market value.” This is why appraisers must perform detailed analysis in the form of multiple paired sales analyses, sale/resale analyses, and regression studies to prove whether these perceptions translate into lower sales prices.

Please let us know if we can answer any additional questions.

Sincerely,

**CohnReznick LLP**

A handwritten signature in black ink, appearing to read "A. R. Lines".

Andrew R. Lines, MAI  
Principal - Valuation Advisory Services  
Certified General Real Estate Appraiser  
Kentucky License 5663  
Expires 6/30/2022

## Mark Heckman Real Estate Rebuttal

CohnReznick has reviewed the BRIGHT MLS data utilized by Mark Heckman Real Estate in the analysis on homes with a view versus all home sales from 3/3/2019 to 9/3/2020, with the following classifications:

Property Type is 'Residential'  
County is 'Adams, PA'  
Status is 'Closed'  
Status Contractual Search Date is 03/03/2019 to 09/03/2020  
Beds is 3 to 4  
Ownership Interest is 'Fee Simple'  
Structure Type is 'Detached'  
Style is 'Ranch/Rambler'  
Lot Size Acres is 5 or less  
View is one of 'City', 'Creek/Stream', 'Golf Course', 'Lake', 'Mountain', 'Panoramic', 'Pasture', 'Pond', 'River', 'Scenic Vista', 'Trees/Woods', 'Valley', 'Water'

We have come to the following conclusions on the analysis and the underlying data.:

- 1) The Heckman MLS analysis does not compare the groups using the appropriate unit of measurement;
- 2) The Control Group is tainted, as test sale data has not been removed before comparison;
- 3) Sales data points have been removed without explanation;
- 4) Short Sales and REO sales have not been removed from consideration;
- 5) Sales having water frontage and access to lakes (aka lakefront property) have not been removed from consideration, which artificially inflate the test group;
- 6) Duplicate sales transactions have not been removed.

Analysis points:

The analysis has two sets of data to compare:

- The test group, which is the 85 home transactions “with a view,” which is the independent variable of the analysis.
  - The control group, which is the 410 home transactions within Adam’s county from the above time frame. The control group should only include data that is not affected by the independent variable of having a view.
- 1) **We note the control group in fact contained the 85 homes within the test group, which both skews the analysis and findings, and reduces the credibility of the analysis. The 85 homes represent roughly 21% of the control group.**
    - As noted by Randy Bell, MAI in the Real Estate Damages 3rd Edition textbook (pg. 147), “Ultimately, issues relating to view diminution and privacy are dependent on the analysis of relevant market data. The value of an obstructed view can be measured by the difference between homes with and without similar views. Similarly, the impact of the fishbowl effect can be measured by comparing sales of properties with private pools against those with more visible backyard areas. Along with empirical data analysis, anecdotal evidence from market participants can be helpful in gaining insight into how such amenities as views and privacy are weighted in the marketplace.”



- 2) The analysis only considers total price, rather than an appropriate unit measurement of price of per square foot of gross building area (“PSF”).
  - o This is important because the 85 analyzed homes within the test group have, on average, a larger building size than the control group by 144 square feet. This may seem like a small difference, but if the average per square foot value is \$150 for both sets of data, **this would account for an average difference of \$21,600 in home price, or equivalent to 10% of median home value for the area.** This size difference may be the 10% Heckman believed reflected a view amenity.
  - o Analyzing both sets of data on a per square foot basis would account for the differences in sizes between both sets of data and is the appropriate unit of comparison.

We have recalculated the “Test Group” of 85 sales “with a view” on a per square foot (“PSF”) basis and compared that with the “control group” of the 410 sales. The chart below shows each group on a per square foot basis, with a percentage difference between the Test and Control data sets.

Summary of the Data				
Price per Square Foot		Price per Square Foot		Percentage Difference
Heckman's Original Test Group "with a view"		Heckman's Original Control Group - 410 Transactions in Adams County		
# of Sales	85	# of Sales	410	
Min	\$79.03	Min	\$39.51	50.01%
Max	\$276.92	Max	\$332.19	-19.96%
Average	\$151.98	Average	\$147.05	3.25%
Median	\$150.46	Median	\$148.35	1.40%

On a per square foot basis, without further analyzing the applicability of the data, the average sales price PSF of the homes “with a view” (test group) have a higher unit price than the 410 sales in Adams County (control group) in that time frame by only 3.25%, NOT 10%, and the median price PSF of the homes “with a view” is only 1.40% higher than the median sales price PSF for the 410 homes.

The median sales price PSF is the most appropriate data point due to the large variance of sales prices PSF.

- 3) When running the defined MLS query (noted on page 1) the MLS report identifies 92 sales. The Heckman analysis notes “7 listings were removed.” However, after further analysis, these seven sales removed are not listings. They represent the three sales with the lowest price points, and the four sales with the highest price points. Additionally, these sales are included within the 410 homes. **There is no explanation why these seven sales are removed from the test group.**

- For the purpose of consistency, in replicating the Heckman analysis, we have also removed these sales from the test group and kept them within the control group.
- 4) REO Sales and Short Sales are not considered market transactions since the buyers and sellers are atypically motivated, may not be acting in what they consider is their best interest, may not have a reasonable exposure time on the open market, and the price considerations are affected by the conditions of the sale. Therefore, these sales shouldn't be used in an impact analysis and should have been removed from consideration. This is typical for any appraiser using data sets to substantiate an adjustment, and of extreme importance in impact studies. Using data that may be artificially low (or high) will clearly result in a conclusion that is not meaningful.

**Market Value is defined as:**

“The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- buyer and seller are typically motivated;
- both parties are well informed or well advised, and acting in what they consider their own best interests;
- a reasonable time is allowed for exposure in the open market;
- payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.”

(Source: Code of Federal Regulations, Title 12, Chapter I, Part 34.42[g])

**Data points:**

Out of the 85 sales “with a view”, one of the sales is an REO sale, as shown below:

Address	City	County	Price/SqFt	Sale Type
15 Green Ridge Rd	New Oxford	Adams, PA	\$108.68	REO (Real Estate Owned)

Out of the 410 sales analyzed, 18 are either an REO sale, or a short sale, as shown on the following page:

Address	City	County	Price/SqFt	Differenc	Sale Type
1 E Locust Ln	New Oxford	Adams, PA	\$65.87		Short Sale
134 Comanche Trl	Hanover	Adams, PA	\$182.93		Short Sale
1498 Mountain Rd	York Springs	Adams, PA	\$169.50		Short Sale
15 Green Ridge Rd	New Oxford	Adams, PA	\$108.68		REO (Real Estate Owned)
15 Rhododendron Dr	Orrtanna	Adams, PA	\$75.62		REO (Real Estate Owned)
150 Jackson Rd	Gettysburg	Adams, PA	\$134.70		REO (Real Estate Owned)
1695 Fish And Game Rd	Littlestown	Adams, PA	\$118.10		Short Sale
220 Ridge Ave	Gettysburg	Adams, PA	\$95.48		Short Sale
2861 Tract Rd	Fairfield	Adams, PA	\$52.51		REO (Real Estate Owned)
30 Colorado Ave	Littlestown	Adams, PA	\$93.75		REO (Real Estate Owned)
315 Coon Rd	Gardners	Adams, PA	\$122.51		REO (Real Estate Owned)
38 Howard Dr	East Berlin	Adams, PA	\$71.68		Short Sale
51 Cashman Rd	New Oxford	Adams, PA	\$70.95		REO (Real Estate Owned)
6 Autumn Dr	Gettysburg	Adams, PA	\$97.40		Short Sale
7 Pine Ln	New Oxford	Adams, PA	\$142.54		Short Sale
765 Wenksville Rd	Biglerville	Adams, PA	\$77.78		REO (Real Estate Owned)
790 Berlin Rd	New Oxford	Adams, PA	\$108.21		Short Sale
85 E Locust Ln	New Oxford	Adams, PA	\$134.38		Short Sale

- We have re-run this analysis the correct way to truly analyze the independent variable of “having a view.” Analyzing the Heckman test group (85 sales “with a view”, less one REO transaction) against the Heckman control group (410 sales, “without a view,” less 85 sales from the test group, less 18 REO Sales and Short Sales), the following statistics are revealed:

Summary of the Data				
Price per Square Foot		Price per Square Foot		
Heckman's Test Group, less REO Sales		Heckman's Control Group, Less the Test Group, Less the REO and Short Sales		Percentage Difference
# of Sales	84	# of Sales	307	
Min	\$79.03	Min	\$39.51	50.01%
Max	\$276.92	Max	\$332.19	-19.96%
Average	\$152.50	Average	\$147.91	3.01%
Median	\$151.73	Median	\$149.94	1.18%

- After removing improper data, the difference between Test and Control groups reflects only a 1.18% difference between the median prices per square foot of Heckman’s test group and control group. This is considered negligible; however, the Heckman data still isn’t completely refined as there were additional individual data points that needed to be analyzed and possibly removed.

5) After analyzing the target sale data, four sales are lakefront properties, with direct lake access (the home has direct water frontage with at least one dock on the property). Lake access is well known as prime real estate and skews the data; this amenity is more than just “a view” as homeowners also can enjoy their own dock and private access to a body of water. We have removed the following data points from the analysis:

Address	City	County	Price/SqFt
22 Lakeview Trl	Fairfield	Adams, PA	\$172.11
286 Lake Meade Dr	East Berlin	Adams, PA	\$254.36
755 McClellan Dr	Gettysburg	Adams, PA	\$224.22
810 Heritage Dr	Gettysburg	Adams, PA	\$181.36

- Access to the lake presents a **separate independent variable** that would positively affect the sales price. Appraisers who perform impact studies need to attempt to isolate one variable at a time (or use a multiple regression statistical analysis model).

In the following table, we have compared the 80 market transactions with views against the 307 market transactions of homes without a view, but without any homes with direct lake access:

Summary of the Data				
Price per Square Foot		Price per Square Foot		
Heckman's Test Group, less REO Sales, less Lake Access		Heckman's Control Group, Less the Test Group, Less the REO and Short Sales, Less Lake Access		Percentage Difference
# of Sales	80	# of Sales	307	
Min	\$79.03	Min	\$39.51	50.01%
Max	\$276.92	Max	\$332.19	-19.96%
Average	\$149.72	Average	\$147.91	1.21%
Median	\$149.96	Median	\$149.94	0.02%

- The difference in median prices per square foot between Heckman's test group and control group is only 0.02%.

6) There is one additional data point within the Heckman's control group that was counted twice due to an MLS error, the sale of 412 North St in Mcsherrystown, PA, which sold on 6/25/2020, for \$160,000, or \$111.81 PSF, slightly skewing the average and median unit price points of the control group downwards.

MLS #	Cat	Status	Address	City	County	Price/SqFt	Difference	Status Contr	Close Date	Current Price
PAAD111088	RES	CLS	412 North St	Mcsherrystown	Adams, PA	\$111.81		6/25/2020	6/25/2020	\$160,000
PAAD110968	RES	CLS	412 North St	Mcsherrystown	Adams, PA	\$111.81		6/25/2020	6/25/2020	\$160,000

- Removing this double-counted sale results in the following results for the Heckman “view analysis”:

Summary of the Data				
Price per Square Foot		Price per Square Foot		
Heckman's Control Group, <b>Less the Test Group, Less the REO and Short Sales,</b>				
Heckman's Test Group, <b>less REO Sales, less Lake Access</b>		Less Lake Access, <b>Less the Sale of 412 North St</b>		Percentage Difference
# of Sales	80	# of Sales	306	
Min	\$79.03	Min	\$39.51	50.01%
Max	\$276.92	Max	\$332.19	-19.96%
Average	\$149.72	Average	\$148.03	1.13%
<b>Median</b>	<b>\$149.96</b>	<b>Median</b>	<b>\$149.96</b>	<b>0.00%</b>

Ultimately, after using proper procedures to eliminate improper and unusable data, the Heckman analysis of a view amenity actually shows that the market does not pay any premiums associated with the elements tied to the MLS “view” characteristics. Therefore, using this data as support for a negative adjustment, based purely on view, is unsupported.

Th Heckman analysis runs an improper experiment by including the test sales “with a view,” within the control sales. The Heckman analysis compares the two groups on a price per home basis, which wouldn’t account for any relative size differences. Both data sets include non-market transactions- REO and Short Sales which are not considered market transactions during times of appreciation and should have been removed. Lastly, his control group data included a duplicate sale. It is clear Mr. Heckman didn’t closely analyze the data he presented within his report, and that he only utilized the “Statistical Summary” charts provided by the MLS to reach his unsupported conclusions<sup>1</sup>.

By further analyzing the data using the Heckman classifications and hypothesis, performing a proper paired group sales analysis with market transactions, proper data points, non-mixed test and control groups, and only analyzing one independent variable, the Adams County sales data would appear to indicate that there is no specific premium paid by the market for any of the “views” Heckman denotes as pervasive in the adjacent property next to the Brookview Solar sites. Using this analysis to support a negative adjustment for view of solar would be inappropriate.

<sup>1</sup> It is noted that the MLS reporting does offer an option to present the data tables with a price per SF metric; for whatever unclear reason - Mr. Heckman chose NOT to show this metric.