

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

**In the Matter of the Application of Barrelhead Solar,)
LLC for a Certificate of Construction for an) Case No. 2025-00177
approximately 54-Megawatt Merchant Electric)
Generating Facility in Wayne County, Kentucky
pursuant to KRS 278.700, et seq., and 807 KAR 4:110**

APPLICANT’S MOTION FOR DEVIATION FROM SETBACK REQUIREMENTS

Applicant Barrelhead Solar, LLC (“Barrelhead Solar”), by counsel, and pursuant to KRS 278.704(4), moves the Kentucky State Board on Electric Generation and Transmission Siting (the “Board”) to grant a deviation from the setback requirements of KRS 278.704(2). Barrelhead Solar seeks a deviation from the 2,000-foot setback requirement to allow it to place generating equipment no closer than 1,000 feet from the nearest residential neighborhood. As grounds for its motion, Barrelhead Solar states as follows:

INTRODUCTION

On October 3, 2025, Barrelhead Solar filed its Application for a Certificate to Construct a Merchant Electric Generating Facility in Wayne County, Kentucky (the “Application”). The setback requirements for the Barrelhead Solar Project (the “Project”) are addressed in the Application.¹ The setback requirements of KRS 278.704(2) are applicable to the Project. This statute provides in pertinent part:

Except as provided in subsections (3), (4), and (5) of this section, no construction certificate shall be issued to construct a merchant electric generating facility unless the exhaust stack of the proposed facility and any wind turbine is at least one thousand (1,000) feet from the property boundary of any adjoining property owner and all proposed structures or facilities used for generation of electricity are two thousand (2,000) feet from any residential neighborhood, school, hospital, or nursing home facility.

¹ Application at 7; Application – Attachment A.

KRS 278.704(2).

A. The 1,000-Foot Setback Requirement

As noted in the Application, the Project's sources of generation are solar panels and associated infrastructure. Because the statutory language for the 1,000-foot setback is limited to those sources of generation with an exhaust stack or a wind turbine, the 1,000-foot setback is inapplicable.

B. The 2,000-Foot Setback Requirement

Without a deviation, all proposed structures or facilities used for generation of electricity must be located more than 2,000 feet from any residential neighborhood, school, hospital, or nursing home facility. No school, hospital, or church is located within 2,000 feet of proposed structures or facilities used for generation of electricity. As defined by KRS 278.700(6), a "residential neighborhood" is "a populated area of five (5) or more acres containing at least one (1) residential structure per acre." As shown in the Application, there are two residential neighborhoods (located to the south of the subject property) within 2,000 feet of the proposed "structures or facilities used for generation of electricity."²

Pursuant to KRS 278.704(4), the Board may grant a deviation from the 2,000-foot setback requirements in KRS 278.704(2) if "the proposed facility is designed to and, as located, would meet the goals of KRS 224.10-280, 278.010, 278.212, 278.24, 278.216, 278.218, and 278.700 to 278.716 at a distance closer than those provided in subsection (2) of this section."

Barrelhead Solar has determined that two residential neighborhoods³ may fall within the

² Application – Attachment A.

³ Barrelhead believes its consideration of residential neighborhoods is consistent with the Siting Board's discussion of "residential neighborhoods" in *Application of Lost City Renewables LLC for a Certificate of Construction for an Approximately 250 Megawatt Merchant Electric Solar Generating Facility in Muhlenberg County, Kentucky Pursuant to KRS 278.710 and 807 KAR 5:110*, Case No. 2024-00406, Order (K.S.B. July 28, 2025).

2,000 feet perimeter of the Project, both of which are over 1,200 feet from the Project's proposed boundary. Barrelhead Solar has revised Figure 4 from the context map (submitted as Attachment A to the application) indicating the location of these residential neighborhoods.⁴ The revised figure provides a conservative rendering of the residential neighborhoods and includes one additional residence in the neighborhoods that was not initially included in the context map filed with the application.⁵ Barrelhead Solar has also provided an updated log of all residences in both neighborhoods within 2,000 feet of the Project.⁶

The first residential neighborhood ("Neighborhood 1") is located on Old Happy Top Road. In total, Neighborhood 1 is 5.64 acres and includes 7 residences. The residential neighborhood includes parts of seven parcels ranging from 0.41 acres to 10.40 acres. The closest residence to the Project in Neighborhood 1 is 1,208.88 feet from the Project's boundary, 1,437.10 feet from the nearest panel, 1,803 feet from the central inverters, and 2,434.76 feet from the Project's transformer. As noted on the context map, a substantial forested area exists between the residential neighborhood and the Project site. The forested area between each residence and the nearest solar panel ranges from 839 feet to 989 feet (or 48.82% and 61.93% of total distance).

The second neighborhood ("Neighborhood 2") is located further east on Old Happy Top Road. In total, Neighborhood 2 comprises 4.07 acres and contains 5 residences. The residential neighborhood includes parts of five parcels ranging in size from 0.73 acres to 4.42 acres. The closest residence in Neighborhood 2 to the Project is 1,297.39 feet from the Project boundary, 1,464.89 feet from the nearest panel, 1,779.16 feet from central inverters, and 2,627.28 feet from the Project's transformer. This residential neighborhood is also separated from the Project site by

⁴ Exhibit 1 – Updated Context Map.

⁵ This additional residence is located on the south side of Old Happy Top Road.

⁶ Exhibit 2 – Log of Residences in Neighborhoods Near Project.

a substantial forested area. The forested area between each residence and the nearest solar array ranges from 866 feet to 1,285 feet (59.15% and 85.35% of total distance).

For the reasons set forth below, and applying guidance from prior Board actions interpreting KRS 278.704(4), Barrelhead Solar believes the proposed facility would meet the goals of KRS 278.700 *et seq.*, and respectfully requests the Board to grant a deviation to the 2,000-foot setback requirement of KRS 278.704(2) to allow it to place generating equipment no closer than 1,000 feet from the nearest residential neighborhood.

Barrelhead Solar's proposed 1,000-foot setback to residential neighborhoods is consistent with the Board's recent decision in *In re Lost City Renewables LLC*, in which the Board granted a deviation allowing 1,000-foot setbacks to residential neighborhoods.⁷ In addition, the proposed 1,000-foot setback is significantly less than the setback ordered in several other cases:

- *Turkey Creek Solar, LLC*, Case No. 2020-00040 (July 22, 2021) (300 feet)
- *Mt. Olive Creek Solar, LLC*, Case No. 2020-00226, (Nov. 3, 2021) (150 feet)
- *Caldwell Solar, LLC*, Case No. 2020-00244 (Apr. 8, 2022) (300 feet)
- *Golden Solar, LLC*, Case No. 2020-00243, (Feb. 21, 2023) (300 feet)
- *Thoroughbred Solar, LLC*, Case no. 2022-00115 (Apr. 10, 2023) (300 feet)
- *Hummingbird Energy, LLC*, Case No. 2022-00272 (Dec. 13, 2023) (300 feet)

ARGUMENT

A. Effects on Adjacent Landowners

In the Board action styled, *In Re ecoPower Generation-Hazard, LLC*, Board Case No. 2009-00530 (hereinafter "*ecoPower*")⁸, the Board enunciated the standards applicable to merchant

⁷ *Lost City Renewables LLC*, Case No. 2024-00406, Order (K.S.B. July 28, 2025).

⁸ Exhibit 2.

generating facilities seeking a deviation from the setback requirements found in KRS 278.704(2). In *ecoPower*, the Board stated, “The setback provisions of KRS 278.704(2) were enacted to afford some level of protection for persons occupying a property adjacent to a property where a merchant generating plant is to be constructed and operated.”⁹ The Board concluded that it must consider the effects of the planned facility on the adjacent residents when determining whether to grant a deviation pursuant to KRS 278.704(4).¹⁰ The Board followed the *ecoPower* deviation procedure in approving the application in *SunCoke Energy South Shore, LLC*, Case No. 2014-00162.

Following the guidance of the Siting Board in *ecoPower* and beginning in 2020, when applications for construction certificates for solar facilities began to be filed, the Board has routinely permitted deviations from the setback requirements like the Project, subject to certain mitigation measures.¹¹

Each of these factors are discussed in more detail below and in the Site Assessment Report included in the Application.¹²

1. Noise

The Site Assessment Report thoroughly evaluates the expected noise levels from the proposed Project and the surrounding properties.¹³ During operation, the Project will generate very little noise that would impact neighboring properties.¹⁴ The nearest noise sensitive receptor to the

⁹ *ecoPower* at 31.

¹⁰ *Id.* at 32.

¹¹ See *Application of Turkey Creek Solar, LLC for a Construction Certificate to Construct an Approximately 50 Megawatt Merchant Electric Solar Generating Facility in Garrard County, Kentucky Pursuant to KRS 278.700 and 807 KAR 5:110*, Case No. 2020-00149, Order (Sept. 23, 2020); and most recently in *Application of Clover Creek Solar Project D/B/A New Frontiers Solar Park for a Certificate of Construction for an Approximately 100 Megawatt Merchant Electric Solar Generating Facility and Nonregulated Electric Transmission Line in Breckinridge County, Kentucky Pursuant to KRS 278.700 and 807 KAR 1:110*, Case No. 2024-00253, Order (May 2, 2025).

¹² Site Assessment Report.

¹³ Application, Appendix E.

¹⁴ *Id.* 15.

Project is a cemetery, which is approximately 161 feet from the nearest panel array.¹⁵

The solar panels will be single-axis fixed panels that will not emit any noise during operation.¹⁶ Inverters on the Project will produce at highest levels noise of 80 dBA, which from 3 feet would be described as a “hum” and match the sound level of a household refrigerator; this is lower than the average level of human conversation, which is 60 dBA.¹⁷ Further, the transformer on site will be over 2,000 feet from the nearest receptor and will generate noise levels of approximately 50 dBA at 3.2 feet, a low hum that will not be heard by the nearest noise sensitive receptor.¹⁸

The Project will generate noise that would impact sensitive receptors, including residential neighborhoods within 2,000 feet of the Project during the construction phase of the Project.¹⁹ The limited construction period for the Project will generate noise that will impact sensitive receptors, as is common for all merchant generating solar facilities. Pile driving will generate the highest level of construction noise at 84 dBA at a distance of 50 feet.²⁰ The nearest noise sensitive receptor, 161 feet from the Project, will experience the pile driving noise impact at only 74 dBA.²¹ The nearest receptor within Neighborhood 1 will experience pile driving noise of 54.83 dBA and the nearest receptor within Neighborhood 2 will experience pile driving noise of 54.66 dBA.²² Pile driving will be limited to a six-month construction period,²³ and Barrelhead Solar proposed pile

¹⁵ *Id.* at 1.

¹⁶ *Id.* at 15.

¹⁷ *Id.* at 15.

¹⁸ *Id.* at 15-16.

¹⁹ *Id.* at 23.

²⁰ *Id.* at 12. Since preparation of the noise analysis, the latest Vermeer PD10 Pile Driver Operator’s and Maintenance Manual (2025) has slightly difference noise levels depending on engine type in the equipment. The latest Vermeer PD10 pile driver noise levels are 80.6 or 89.6 dBA at a distance of 50 feet. The relevant pages of the 2025 Vermeer PD10 Manual is attached as Exhibit 3.

²¹ *Id.* at 12.

²² Using the latest Vermeer PD10 pile driving noise estimates and engine type, the nearest receptor within Neighborhood 1 will experience pile driving noise of approximately 51.43 to 60.43 dBA. The nearest receptor in Neighborhood 2 will experience pile driving noise of approximately 51.26 to 60.26 dBA.

²³ *Id.* at 12.

driving to only occur from 8 a.m. to 5 p.m. Monday through Friday.²⁴ Pile driving is not stationary and will occur throughout the Project. When the pile drivers are further from noise sensitive receptors, the sound impact will be even further reduced for those receptors.²⁵ If necessary, Barrelhead Solar will use a noise suppression construction method to minimize pile-driving noise to impact sensitive receptors within 1,000 feet.²⁶ Other, non-noise-causing construction activities (including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.) may occur Monday through Sunday.²⁷

Ultimately, any noise generated during Project construction will be intermittent and temporary as not all equipment will operate at the same time and equipment will be moved throughout the Project site.²⁸ Construction is only anticipated to last for eight to twelve months and during operation, the ambient sound environment will return to its current levels. Barrelhead Solar anticipates the overall noise impacts of the Project will be negligible to sensitive receptors.²⁹

2. Visual Obstruction of Scenic Views

The Application provides an in-depth analysis of the compatibility of the facility with the scenic surroundings.³⁰ “Visibility of the Project is expected generally to be minimal and is not anticipated to result in any adverse impacts on the receptor locations, aesthetic resources, or scenic views.”³¹ Barrelhead Solar defines visibility as a location where the Project is visible, even if it is minimal, partial, or seen through obstruction.³² Only four of the 40 receptors in the area are

²⁴ *Id.* at 10.

²⁵ *Id.* at 12.

²⁶ Site Assessment Report at 11.

²⁷ Application – Appendix E at 10.

²⁸ *Id.* at 23.

²⁹ *Id.* at 24.

³⁰ Application – Appendix G at 3.

³¹ *Id.* at 3.

³² *Id.* at 3.

anticipated to have moderate to high visibility of the Project.³³ Of the 12 total receptors in residential neighborhoods,³⁴ only three are expected to experience Project visibility, ranging from 0.71% to 7% visibility, which is considered low visibility.³⁵

Two residences in Neighborhood 1 will have less than 7% Project visibility, which has been defined as low visibility.³⁶ There is significant forestation between the residences in Neighborhood 1 and the Project. The range of the composite of forested land between Neighborhood 1 and the Project is 48.82 to 61.93%. Barrelhead Solar expects a limited green glare, glare with low potential to cause an after-image, akin to “flash blindness” for a total of 27.4 hours or 0.3% of the year.³⁷ The residence in Neighborhood 1 with the highest level of green glare is Projected to experience that for a total of 19.2 hours or 0.2% of the year.³⁸ Barrelhead Solar does not expect the Project to have any significant visual impact on the residences in Neighborhood 1.

Similarly, in Neighborhood 2, only one residence will have any Project visibility, projected to be 0.7% – a significantly low level of Project visibility.³⁹ The forested areas between Neighborhood 2 and the Project will also provide extensive visual buffering for the residences and the Project. At any location in Neighborhood 2, the land between the boundaries of Neighborhood 2 and the Project is comprised of 59.15 to 85.35% forested areas. The natural visual buffer in place between both Neighborhood 1 and Neighborhood 2 will provide significant screening for the Project. Neighborhood 2 will experience limited green glare, a total of 11.6 hours or 0.13% of the year. The residence in Neighborhood 2 with the highest level of green glare impact will experience 3.2 hours, 0.04% of the year, of green glare annually. Ultimately, Barrelhead Solar does not expect

³³ *Id.* at 4-5.

³⁴ *Id.* at 5.

³⁵ *Id.* at 4.

³⁶ Exhibit 1 – Updated Context Map; Application – Appendix G at 4.

³⁷ Application – Appendix H at 3.

³⁸ *Id.*

³⁹ Exhibit 1 – Updated Context Map; Application – Appendix G at 4.

Neighborhood 2 to experience any significant viewshed or glare impacts from the Project.

Barrelhead Solar further plans to mitigate any viewshed impacts to the residential properties. Currently, there is no landscaping on the southern part of the Project site, which is closest to Neighborhood 1 and Neighborhood 2. The landscape plan Barrelhead Solar has planned to implement will establish vegetation, specifically on the southern part of the Project site, to further shield the residential neighborhoods from view of the Project. For this portion of the site, and the entire Project site, Barrelhead has proposed to implement the following measures to minimize any viewshed impact on its neighbors:⁴⁰

- Existing vegetation between solar arrays and nearby roadways and homes will be left in place to the extent feasible to help minimize visual impacts and screen the Project from nearby homeowners and travelers. Barrelhead Solar will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.
- Barrelhead Solar will implement planting of native evergreen species as a visual buffer to mitigate visual viewshed impacts, in areas where those viewshed impacts occur from residences or roadways directly adjacent to the Project and there is not adequate existing vegetation. If it is not adequate, then vegetation ten feet thick reaching six feet at maturity (in four years) will be added by Barrelhead Solar between Project infrastructure and residences, or other occupied structures, with a line of sight to the facility to the reasonable satisfaction of the affected adjacent property owners. Planting of vegetative buffers may be done over the construction period; however, Barrelhead Solar will prioritize vegetative planting at all periods of construction to reduce viewshed impacts. All planting will be

⁴⁰ Site Assessment Report at 10-11.

done prior to the operation of the facility.

- Barrelhead Solar will cultivate at least two acres of native, pollinator friendly species on-site.
- Barrelhead Solar will carry out visual screening consistent with the landscape plan proposed in its application, SAR, and the maps included, and ensure that the proposed new vegetative buffers are successfully established and developed as expected over time. Should vegetation used as buffers die over time, Barrelhead Solar will replace plantings as necessary.
- To the extent that an affected adjacent property owner indicates to Barrelhead Solar that a visual buffer is not necessary, Barrelhead Solar will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

Barrelhead anticipates that the distance of the majority of sensitive receptors in conjunction with the landscaping plan will further reduce the minimal visibility impact from the Project.⁴¹

3. Traffic

The Application analyzes the traffic impact during both the construction and operation phases of the proposed facility.⁴² Barrelhead Solar acknowledges that traffic around the Project may increase during Project construction. Initially, Barrelhead Solar will prepare the site for construction through timber removal, which may occur in a three to four month period.⁴³ Currently, Barrelhead Solar intends to clear less than 11 acres of timber to prepare for construction. During construction, Barrelhead Solar anticipates a temporary increase in traffic volume may occur with the travel of construction workers and delivery of equipment and materials, but will only be for a

⁴¹ Application – Appendix G at 4.

⁴² Application – Appendix I.

⁴³ *Id.* at 4.

limited period of time.⁴⁴ Though traffic may increase during the construction phase of the Project, there is no indication that construction traffic will “cause significant operational changes” to current roadways and traffic patterns.⁴⁵

To ensure minimal traffic impact to the area, Barrelhead Solar will also develop a traffic management plan with the Wayne County Road Department, (“WCRD”) Wayne County Fiscal Court, and the Kentucky Transportation Cabinet (“KYTC”) in advance of construction.⁴⁶ Barrelhead Solar proposed the following mitigation measures during and after the construction phase:

- The Applicant will develop a road use agreement with the WCRD and the Wayne County Fiscal Court. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits, and bridge weight limits. It also might include the use of a flag person during heavy commute periods, prioritizing access for nearby residents, and implementing staggered work shifts during daylight hours to manage construction traffic flow near the Project Area.
- Construction activities, processes, and deliveries will be limited to the hours between 7:00 am and 7:00 pm, Monday through Saturday; construction activities that create a higher level of noise, such as pile-driving, will be limited to 8 a.m. to 5 p.m. local time, Monday through Friday. Non-noise-causing and non-construction activities can take place on the site between 6 a.m. and 10 p.m. local time, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.
- Appropriate signage and traffic signaling will be used as needed to aid construction traffic

⁴⁴ *Id.* at 5.

⁴⁵ *Id.* at 6.

⁴⁶ *Id.* at 3.

and prevent severe traffic issues.

- Four access points will spread construction and worker vehicles entering and leaving the Project Area.
- The Applicant will fix or pay for repairs for damage to roads and bridges resulting from any transport to the site, according to the road use agreement. For damage resulting from vehicle transport in accordance with all permits, those permits will control.
- The Applicant will comply with laws and regulations regarding use of roadways.
- The Applicant will consult with KYTC regarding truck and other construction traffic and obtain necessary permits from KYTC, including any permits needed for commercial vehicle classes used for transporting equipment and materials to the Project Area.
- The Applicant will consult with the WCRD regarding truck and other construction traffic and obtain any necessary permits from the WCRD, including any permits needed for commercial vehicle classes used for transporting equipment and materials to the Project Area.
- The Applicant will develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.
- The Applicant will develop and implement a traffic management plan to minimize the impact on traffic flow and keep traffic safe. Any such traffic management plan will also identify any traffic-related noise concerns during the construction phase and develop measures that would address those noise concerns.
- The Applicant will implement ridesharing between construction workers when feasible, use appropriate traffic controls, or allow flexible working hours outside of peak hours to minimize potential traffic delays during AM and PM peak hours.

- The Applicant will properly maintain construction equipment and vehicles and follow best management practices related to fugitive dust through the construction process, including the use of water trucks. Dust impacts shall be kept at a minimum level in compliance with 401 KAR 63:010.
- Activities that disturb land during the construction of the Project may temporarily add airborne materials. To reduce the contribution of airborne materials, the application of water to unpaved on-site roadways may occur. Vegetative buffer and revegetation measures along fencerows and property boundaries will help mitigate fugitive dust impacts to adjacent areas. Dust impacts will be kept at a minimal level to comply with 401 KAR 63:010.⁴⁷

The Project will not have long-term traffic impacts because the operation and maintenance of the Project will only require a small number of employees intermittently visiting the Project site.⁴⁸

4. Barrelhead Solar's Mitigation Efforts

Barrelhead Solar has done extensive outreach to the community and local officials to inform them and engage with them about the Project.⁴⁹ Barrelhead Solar began coordinating with Wayne County officials in late 2024 regarding the Project. On February 27, 2025, local officials and Project representatives met to discuss the Project, the Kentucky Siting Board approval process, the process for obtaining an Industrial Revenue Bond and a Payment in Lieu of Taxes agreement. Then, on April 2, 2025, Barrelhead Solar held a public meeting about the Project. This meeting was an open house that allowed Project representatives and subject matter experts to provide

⁴⁷ *Id.* at 3-4.

⁴⁸ *Id.* at 5.

⁴⁹ Application at 8; Attachment D.

information about various components of the Project's development and operation.⁵⁰ Later, on July 17, 2025 and July 29, 2025, Barrelhead Solar sent letters to adjacent, non-participating landowners regarding the Project.⁵¹ Barrelhead Solar will continue to engage with the local community and neighboring property owners as directed during the permitting process.⁵² During construction and operation, Barrelhead Solar has committed to establishing a complaint resolution program to address neighboring property owners' concerns.⁵³

Barrelhead Solar has worked in advance to anticipate and mitigated potential adverse impacts the Project may have on neighboring property owners. As a result, Barrelhead Solar has preemptively proposed 34 mitigation measures to minimize any potential adverse impact to its neighbors:⁵⁴

- A final site layout plan will be submitted to the Siting Board upon completion of the final site design prior to construction. Deviations from the preliminary site layout will be clearly indicated on the revised graphic. Those changes could include, but are not limited to, location of solar panels, inverters, transformers, substation, operation and maintenance building, transmission line route, or other Project facilities and infrastructure.
- Any change in the Project boundaries from the information that formed this evaluation will be submitted to the Siting Board for review.
- The Siting Board will determine whether any deviation in the boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts.
- Barrelhead Solar will provide the date construction will commence to the Siting Board and

⁵⁰ Application at 8-9.

⁵¹ Application at 5; Application – Attachment B.

⁵² Application at 9.

⁵³ Site Assessment Report at 13.

⁵⁴ *Id.* at 10-13.

the Kentucky Energy and Environment Cabinet (EEC) 30 days prior to that date.

- Prior to construction, Barrelhead Solar will provide a finalized Emergency Response Plan to the local fire district, first responders, and any County Emergency Management Agency. Barrelhead Solar will provide site specific training for local emergency responders at their request. Access for fire and emergency units will be set up after consultation with local authorities.
- Barrelhead Solar or its contractor will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.
- Barrelhead Solar's access control strategy will also include appropriate signage to warn potential trespassers. Barrelhead Solar will ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.
- The security fence will be installed prior to activation of any electrical installation work in accordance with NESC standards. The substation will have its own separate security fence and locked access installed in accordance with NESC standards.
- Existing vegetation between solar arrays and nearby roadways and homes will be left in place to the extent feasible to help minimize visual impacts and screen the Project from nearby homeowners and travelers. Barrelhead Solar will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.
- Barrelhead Solar will implement planting of native evergreen species as a visual buffer to mitigate visual viewshed impacts, in areas where those viewshed impacts occur from residences or roadways directly adjacent to the Project and there is not adequate existing

vegetation. If it is not adequate, then vegetation ten feet thick reaching six feet at maturity (in four years) will be added by Barrelhead Solar between Project infrastructure and residences, or other occupied structures, with a line of sight to the facility to the reasonable satisfaction of the affected adjacent property owners. Planting of vegetative buffers may be done over the construction period; however, Barrelhead Solar will prioritize vegetative planting at all periods of construction to reduce viewshed impacts. All planting will be done prior to the operation of the facility.

- Barrelhead Solar will cultivate at least two acres of native, pollinator friendly species on-site.
- Barrelhead Solar will carry out visual screening consistent with the landscape plan proposed in its application, SAR, and the maps included, and ensure that the proposed new vegetative buffers are successfully established and developed as expected over time. Should vegetation used as buffers die over time, Barrelhead Solar will replace plantings as necessary.
- To the extent that an affected adjacent property owner indicates to Barrelhead Solar that a visual buffer is not necessary, Barrelhead Solar will obtain that property owner's written consent and submit such consent in writing to the Siting Board.
- Barrelhead Solar will limit construction activity, process, and deliveries to the hours between 8 a.m. and 6 p.m. local time, Monday through Saturday. Construction activities that create a higher level of noise, such as pile-driving, will be limited to 8 a.m. to 5 p.m. local time, Monday through Friday. Non-noise causing and non-construction activities can take place on the site between 7 a.m. and 10 p.m. local time, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.

- If the pile-driving activity occurs within 1,000 feet of a noise-sensitive receptor, Barrelhead Solar will implement a construction method that will suppress the noise generated during the piling process (i.e., semi-tractor and canvas method, sound blankets on fencing surrounding the solar site, or any other comparable method). Barrelhead Solar can forego using noise suppression measures if it employs a panel installation method that does not use pile driving, so long as that method does not create noise levels similar to pile driving.
- Barrelhead Solar will notify residents and businesses within 2,400 feet of the Project boundary about the construction plan, the noise potential, any mitigation plans, and its Complaint Resolution Program at least one month prior to the start of construction.
- Barrelhead Solar will place panels, inverters, and substation equipment consistent with the distances to noise receptors it has committed in its maps and site plans. However, Barrelhead Solar will not place solar panels or string inverters, if used, closer than 150 feet from a residence, church, or school, 25 feet from non-participating adjoining parcels, or 50 feet from adjacent roadways. Barrelhead Solar will not place a central inverter closer than 450 feet from any adjacent residences, church, or school. These setbacks will not be required for residences owned by landowners involved in the Project that explicitly agree to lesser setbacks and have done so in writing. All agreements by participating landowners to lesser Barrelhead Solar Project Site Assessment Report setbacks will include language advising the participating landowners of the setbacks otherwise required herein. All agreements by participating landowners to lesser setbacks will be filed with the Siting Board prior to commencement of the Project.
- Barrelhead Solar will fix or pay for repairs for damage to roads and bridges resulting from any vehicle transport to the site. For damage resulting from vehicle transport in accordance

with all permits, those permits will control.

- Barrelhead Solar will comply with all laws and regulations regarding the use of roadways.
- Barrelhead Solar will implement ridesharing between construction workers when feasible, use appropriate traffic controls, or allow flexible working hours outside of peak hours to minimize any potential traffic delays during AM and PM peak hours.
- Barrelhead Solar will consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.
- Barrelhead Solar will consult with the Wayne County Road Department (WCRD) regarding truck and other construction traffic and obtain any necessary permits from the WCRD.
- Barrelhead Solar will develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.
- Barrelhead Solar will comply with any road use agreement executed with WCRD. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits, and bridge weight limits.
- Barrelhead Solar will develop and implement a traffic management plan to minimize the impact on traffic flow and keep traffic safe. Any such traffic management plan will also identify any traffic-related noise concerns during the construction phase and develop measures that would address those noise concerns.
- Barrelhead Solar will properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process, including the use of water trucks. Dust impacts will be kept at a minimal level. The Siting Board requires Barrelhead Solar's compliance with 401 KAR 63:010.

- If any Person as defined by KRS 278.700(3) will acquire or transfer ownership of, or control, or the right to control Barrelhead Solar, by sale of assets, transfer of stock, or otherwise, or abandon the same, Barrelhead Solar or its successors or assigns will request explicit approval from the Siting Board with notice of the request provided to the Wayne County Fiscal Court. In any application requesting such abandonment, sale, or change of control, Barrelhead Solar and any proposed entity with an ownership interest in Barrelhead Solar will certify its compliance with KRS 278.710(1)(i).
- As applicable to individual lease agreements, Barrelhead Solar, its successors, or assigns will abide by the specific land restoration commitments agreed to by individual property owners, as described in each executed lease agreement.
- Barrelhead Solar has filed a complete and explicit decommissioning plan with the Siting Board. If this decommissioning plan should change, Barrelhead Solar will submit an updated decommissioning plan pursuant to KRS 278.710(8).
- Barrelhead Solar or its assigns will provide notice to the Siting Board, if, during any two-year (730 days) period, it replaces more than 20 percent of its facilities. Barrelhead Solar will commit to removing the debris and replaced facility components from the Project site and from Wayne County upon replacement. If the replaced components are properly disposed of at a permitted facility, they do not have to be physically removed from Wayne County. However, if the replaced facility components remain in the County, Barrelhead Solar will inform the Siting Board of the location where the components are being disposed.
- Any disposal or recycling of Project equipment, during operations or decommissioning, will be done in accordance with applicable laws and requirements.

- Barrelhead Solar will initiate and maintain the Complaint Resolution Program provided to the Siting Board in the case record to address any complaints from community members. Barrelhead Solar will also submit annually a status report associated with its Complaint Resolution Program, providing, among other things, the individual complaints, how Barrelhead Solar addressed those complaints, and the ultimate resolution of those complaints identifying whether the resolution was to the complainant's satisfaction.
- Barrelhead Solar will provide Wayne County contact information for individuals within the company that can be contacted with concerns. This shall include contact information for the general public to reach individuals that can address their concerns. Barrelhead Solar will update this contact information yearly, or within 30 days of any change in contact information.
- Within 30 days of an application decision, Barrelhead Solar will send a copy of the Sting Board order approving the construction certificate to all the adjoining landowners who previously were required to receive notice of this Project.

The Board should grant this motion for deviation because Barrelhead Solar has made every effort to protect property owners from all adverse impacts that might result from the construction and operation of the facility. The Project will not produce any emissions, will produce a negligible amount of noise during operation, and will be screened with vegetative buffering.

B. The Proposed Facility is Designed and Located to Meet the Goals of KRS 278.700, et seq.

In initially denying *ecoPower's* motion for a deviation, the Board stated that the Applicant must satisfy the goals of certain statutes described in KRS 278.704(4) as follows:

1. KRS 224.10-280 Cumulative Environmental Assessment.

KRS 224.10-280 provides that no person shall commence to construct a facility to be used

for the generation of electricity unless that person has submitted a cumulative environmental assessment (“CEA”) to the Energy and Environment Cabinet (“Cabinet”) with its permit application, and remits a fee which has been set pursuant to KRS 224.10-100(20).

Upon researching the statute and accompanying regulations, Barrelhead Solar is unaware of any regulations that have been promulgated regarding CEAs. At the time of the *ecoPower* Order, the Board concluded that there were no regulations involving CEAs⁵⁵ and Barrelhead Solar is unaware of any additional regulations since that order. Consequently, no fee has been established for Barrelhead Solar to pay “to defray the cost of processing the cumulative environmental assessment.”⁵⁶

But to satisfy the goals of KRS 224.10-280, Barrelhead Solar submitted the CEA to the Cabinet which provides an in-depth analysis of the potential air pollutants, water pollutants, wastes, and water withdrawal associated with the proposed merchant solar facility.⁵⁷

AIR EVALUATION - KRS 224.10-280(3)(a)

As required by KRS 224.10-280(3)(a), the CEA evaluates the air pollutants to be emitted by the facility and the associated control measures.⁵⁸ The solar panels produce zero emissions. In fact, during operation, only workers’ vehicles and maintenance activities, such as mowers to control vegetation onsite, will generate emissions.⁵⁹ During construction, the Project will generate temporary fugitive air pollutant emissions, largely from vehicles and construction travelling over unpaved roads and general construction activities. These emissions will be minor and well below applicable NAAQS levels.⁶⁰ The Project’s contractor will maintain all equipment and use best

⁵⁵ *ecoPower* at 34.

⁵⁶ KRS 224.10-280.

⁵⁷ Application at 18; Application – Attachment H.

⁵⁸ *Id.* at 4.

⁵⁹ *Id.* at 5.

⁶⁰ *Id.*

management practices like covering loads and using wet dust suppression to reduce fugitive dust emissions to be in compliance with 401 KAR 63:010.⁶¹ Barrelhead Solar will also revegetate disturbed areas in compliance with Kentucky Department of Water Construction Storm Water Discharge General Permit to minimize fugitive dust emissions.⁶²

WATER EVALUATION - KRS 224.10-280(3)(b)

As required by KRS 224.10-280(3)(b), the CEA evaluates the water pollutants to be emitted by the facility and the associated control measures.⁶³ Wetlands, ponds, and streams are present on the Project site. During construction, to prevent stormwater erosion, Barrelhead Solar will utilize existing landscape and will minimize grading work to install the panels. Any grading performed will be made to match existing slopes on the site.⁶⁴ Further, Barrelhead Solar will comply with the Construction Storm Water Discharge General Permit requirements.⁶⁵ Using best management practices, Barrelhead Solar will complete a stormwater pollution prevention plan to minimize sediment entering waters during construction, which includes the use of silt fences, on-site temporary sediment basins, sediment traps, and buffer zones surrounding jurisdictional streams and wetlands.⁶⁶ New vegetation will be planted after construction and will be maintained by sheep grazing and mowing.⁶⁷ Barrelhead Solar will only use EPA registered and approved herbicides.⁶⁸

Barrelhead Solar does not anticipate any direct or adverse impact to groundwater. The

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.* at 6.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* at 7.

⁶⁸ *Id.*

rainwater runoff from the solar panel systems will drain onto the vegetated ground. Barrelhead Solar will never store materials that will contaminate the groundwater on the Project site – even during construction.⁶⁹ Only one gas well is located on the Project Site and is a dry hole plugged consistent with Kentucky regulation.⁷⁰

WASTE EVALUATION - KRS 224.10-280(3)(c)

As required by KRS 224.10-280(3)(c), the CEA evaluates the waste to be generated by the facility and the associated control measures.⁷¹ Barrelhead Solar will dispose of all waste generated from the Project consistent with local, state, and federal regulation. During construction, the Project will generate construction debris and general trash. Barrelhead Solar will dispose of all non-recyclable material at an off-site permitted facility and, to the extent feasible, will recycle material.⁷² The Project contractor will use proper disposal containers during construction.⁷³ All construction materials will be properly stored on site and in the event of a spill or some accident, the contractor will follow spill prevention, control, and countermeasure plan.⁷⁴ During operation, waste will be minimal and will only arise from maintenance or replacement of broken or defective equipment. Barrelhead Solar will continue to dispose of all waste based on local, state, and federal requirements.⁷⁵

WATER WITHDRAWAL EVALUATION - KRS 224.10-280(3)(d)

As required by KRS 224.10-280(3)(d), the CEA identifies the source and volume of anticipated water withdrawal needed to support facility construction and operations, and the CEA

⁶⁹ *Id.*

⁷⁰ *Id.* at 8.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.* at 9.

⁷⁵ *Id.*

describes the methods to be used for managing water usage and withdrawal.⁷⁶ Barrelhead Solar detected aquifers beneath the Project site. This water and water brought in from outside sources will be used during construction and operation of the Project.⁷⁷ During construction, water will be used for grading activities, dust control and compaction, and minor uses related to equipment management.⁷⁸ The volume of water needed for construction activities will not adversely impact local water resources. During operation, the Project will not be water intensive. Precipitation will be adequate to remove dust and debris from the panels, so washing panels will not be part of regular maintenance.⁷⁹ Precipitation will also maintain vegetation, but some water may be needed while installing vegetative screening and during times of drought.⁸⁰

In summary, the Project is designed and located to meet the goals of KRS 224.10-280. Barrelhead Solar has submitted a CEA to the Cabinet which contains a description and analysis of anticipated air pollutants, water pollutants, wastes, and water withdrawal needs. The CEA also references the substantial amount of planning, permitting, and assessments which have been completed for the facility and which are ongoing. The Project development team shall continue permitting as required to comply with all applicable regulations.

⁷⁶ *Id.* at 9-10.

⁷⁷ *Id.* at 9.

⁷⁸ *Id.*

⁷⁹ *Id.* at 10.

⁸⁰ *Id.*

KRS 278.010 provides a list of definitions to be used in conjunction with KRS 278.010 to 278.450, 278.541 to 278.544, 278.546 to 278.5462, and 278.990. The Board's authority begins with KRS 278.700 and extends through KRS 278.716 and any applicable provision of 278.990. In filing a complete Application pursuant to the applicable statutes in this proceeding, Barrelhead Solar has satisfied the goal of providing the required information utilizing the definition of any applicable term defined in KRS 278.010.

1. KRS 278.212. Filing of plans for electrical interconnection with merchant electric generating facility; costs of upgrading existing grid.

Barrelhead Solar has met the goals of KRS 278.212 because Barrelhead Solar will comply with all applicable conditions relating to electrical interconnection with utilities by following the PJM interconnection process. The Project was grouped into the PJM Transition Cycle #1. The first phase of the system impact study was completed in May 2024, and the second phase was completed in December 2024. Based on the results of the December 2024 study, the Project was downsized to 54 MW of new solar photovoltaic generation based on PJM's grid capacity.⁸¹ Additionally, Barrelhead Solar will accept responsibility for appropriate costs which may result from its interconnecting with the electricity transmission grid. With Barrelhead Solar's commitment to comply with KRS 278.212, the proposed facility has been designed and located to meet the goals of KRS 278.212.

2. KRS 278.214. Curtailment of service by utility or generation and transmission cooperative.

The goal of this statute is to establish the progression of entities whose service may be interrupted or curtailed pursuant to an emergency or other event. Barrelhead Solar will abide by the requirements of this provision to the extent that these requirements are applicable. By

⁸¹ Application at 12; Application – Attachment E.

committing to comply with these requirements Barrelhead Solar has met the goals anticipated by the statute.

3. KRS 278.216. Site compatibility certificate; site assessment report; commission action on application.

KRS 278.216 requires a jurisdictional utility, as defined by KRS 278.010(3), which seeks to construct an electric generating facility to comply with many of the requirements that are included within KRS 278.700 to 278.716, including the submission of a site assessment report. However, KRS 278.216 specifically applies to jurisdictional utilities, as defined in KRS 278.010(3), and Barrelhead Solar is not such a defined utility. Therefore, by complying with the requirements of KRS 278.700 *et seq.*, Barrelhead Solar has met the requirements and goals of KRS 278.216.

4. KRS 278.218. Approval of commission for change in ownership or control of assets owned by utility.

This statute specifically applies to utilities as those defined pursuant to KRS 278.010(3). The statute prohibits acquisition or transfer without prior approval of the Commission. Barrelhead Solar is not a utility as described in 278.010(3), and therefore this statute does not apply to Barrelhead Solar. However, to the extent Board approval may at some time be required for change of ownership or control of assets owned by Barrelhead Solar, it will abide by the applicable rules and regulations which govern its operation.

5. KRS 278.700 - 278.716. Electric Generation and Transmission Siting.

These provisions of the Kentucky Revised Statutes govern the application of a merchant electric generating facility such as the one proposed by Barrelhead Solar in its Application to the Board. According to the Board itself, the goals of these provisions include the following: to provide for the location of merchant electric generating facilities in a fashion which will not intrude

upon or unnecessarily disrupt surrounding land uses including hospitals, nursing homes, residential areas, schools, parks or otherwise have adverse environmental impacts which are not otherwise regulated; to include an evaluation of the economic impact of the proposed facility (KRS 278.710(l)(c)); to determine whether the facility is to be located at a site where existing generating facilities are located (KRS 278.710(l)(d)); to determine whether the facility will meet all applicable local planning and zoning requirements (KRS 278.710(l)(e)); to determine whether the facility will adversely impact the reliability of electrical service for retail customers of utilities regulated by the Public Service Commission (KRS 278.710(l)(f)); to determine the efficacy of any proposed mitigation measures (KRS 278.710(l)(h)); and to provide the applicant's history of environmental compliance (KRS 278.710(l)(i)).⁸²

Thus, Barrelhead Solar has met the goals set forth in these provisions as evidenced by the Application in its entirety. Barrelhead Solar has provided a comprehensive Application with a detailed discussion of all of the criteria applicable to its proposed facility under KRS 278.700-278.716. Barrelhead Solar has engaged in public education and public notification, has held a public meeting and other meetings to respond to inquiries concerning the Project, and has specifically discussed and made itself available for questioning by adjoining landowners concerning the property. Only two residential neighborhoods fall within the 2,000-foot Project radius, and only 3 of 12 residences will have low Project visibility within those neighborhoods.

Barrelhead Solar has clearly met the goals of KRS 278.700 *et seq.* in locating its proposed facility in an environmentally compatible location, disclosing the facts surrounding its proposed operation, responding to inquiries, and obtaining the proper permits for the facility.

⁸² *ecoPower* at 39.

III. CONCLUSION

WHEREFORE, Barrelhead Solar requests a deviation from the setback requirements contained in KRS 278.704(2) as the proposed facility is designed and located to meet the goals of the statutory provisions set forth in KRS 278.704(4).

Respectfully submitted,

M. Todd Osterloh

STURGILL, TURNER, BARKER & MOLONEY, PLLC

James W. Gardner

M. Todd Osterloh

Rebecca Price

333 West Vine Street, Suite 1500

Lexington, KY 40507

Phone: 859-255-8581

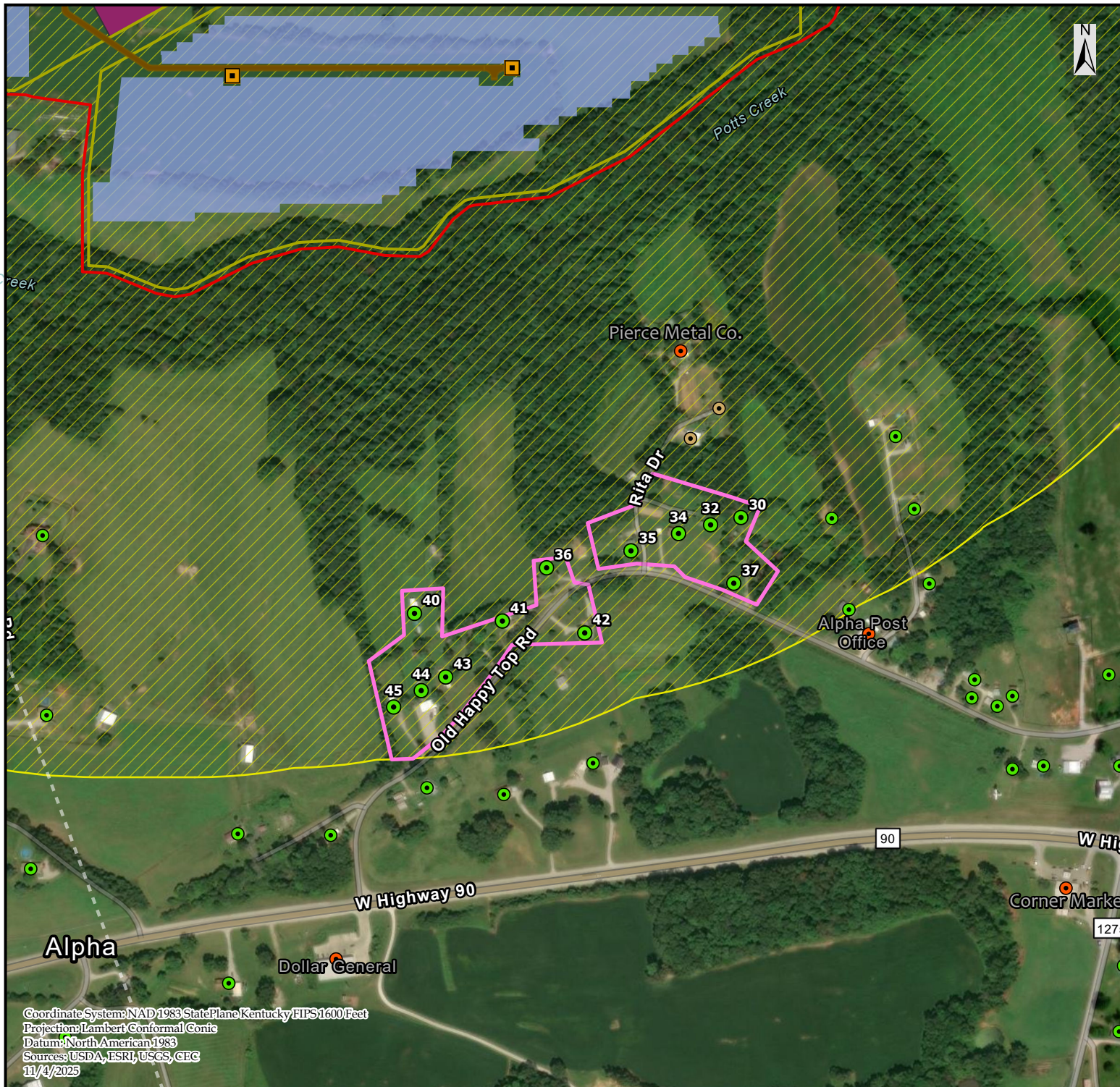
Fax: 859.231.0851

jgardner@sturgillturner.com

tosterloh@sturgillturner.com

rprice@sturgillturner.com

Counsel for Barrelhead Solar LLC



Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Sources: USDA, ESRI, USGS, CEC
11/4/2025



COPPERHEAD
ENVIRONMENTAL CONSULTING

Prepared for:

Barrelhead Solar, LLC

REVISED FIGURE 4:
Residential Neighborhoods
for the Barrelhead Solar Project,
Wayne County, Kentucky.

Legend

- Commercial
 - Barn
 - Residence
 - Inverter
 - Residential Neighborhood
 - Fence
 - Project Road
 - Solar Array
 - Substation
 - 2000ft Buffer
 - Project Boundary
- 0 500 1,000
US Feet
Scale: 1 in = 500 ft

Prepared by :

Copperhead Environmental Consulting, Inc.
471 Main Street
P.O. Box 73
Paint Lick, Kentucky 40461

Drawn by: CM Date: 11/4/2025

Checked by: MM Revision: 09



Exhibit 1

West Side

Photo Number	ID Number	Street Address	Parcel Number	Acreage
1	36	420 Old Happy Top Rd, Monticello, KY 42633	006-00-00-066.00	0.41
2	40	121 Hoover Lane Monticello, KY 42633	006-00-00-071.00	10.40
3	41	486 Old Happy Top Rd, Monticello, KY 42633	006-00-00-067.00	0.53
4	42	445 Old Happy Top Rd, Monticello, KY 42633	007-00-00-004.00	3.59
5	43	558 Old Happy Top Rd, Monticello, KY 42633	006-00-00-068.00	1.43
6	44	570 Old Happy Top Rd, Monticello, KY 42633	006-00-00-069.00	0.82
7	45	590 Old Happy Top Rd, Monticello, KY 42633	006-00-00-070.00	0.84

East Side

Photo Number	ID Number	Street Address	Parcel Number	Acreage
8	30	63 Gander Ln, Alpha, KY 42603	006-00-00-058.00	4.42
9	32	58 Rita Dr, Monticello, KY 42633	006-00-00-061.00	2.27
10	34	352 Old Happy Top Rd, Monticello, KY 42633	006-00-00-059.00	1.38
11	35	21 Rita Dr, Monticello, KY 42633	006-00-00-060.00	0.75
12	37	19 Gander Ln, Alpha, KY 42603	006-00-00-057.00	0.73

**WEST
NEIGHBORHOOD**

Photo Number: 1

ID Number: 36

Acreage: 0.41 ac

Parcel Number:
006-00-00-066.00



Photo Number: 2

Click or tap to enter a date.

ID Number: 40

Acreage: 10.40 ac

Parcel Number:
006-00-00-071.00



Photo Number: 3

Click or tap to enter a date.

ID Number: 41

Acreage: 0.53 ac

Parcel Number:
006-00-00-067.00



Photo Number: 4

Click or tap to enter a date.

ID Number: 42

Acreage: 3.59 ac

Parcel Number:
007-00-00-004.00



Photo Number: 5

Click or tap to enter a date.

ID Number: 43

Acreage: 1.43 ac

Parcel Number:
006-00-00-068.00



Photo Number: 6

Click or tap to enter a date.

ID Number: 44

Acreage: 0.82 ac

Parcel Number:
006-00-00-069.00



Photo Number: 7

Click or tap to enter a date.

ID Number: 45

Acreage: 0.84

Parcel Number:
006-00-00-070.00



**EAST
NEIGHBORHOOD**

Photo Number: 8

Click or tap to enter a date.

ID Number: 30

Acreage: 4.42 ac

Parcel Number:
006-00-00-058.00



Photo Number: 9

Click or tap to enter a date.

ID Number: 32

Acreage: 2.27 ac

Parcel Number:
006-00-00-061.00



Photo Number: 10

Click or tap to enter a date.

ID Number: 34

Acreage: 1.38 ac

Parcel Number:
006-00-00-059.00



Photo Number: 11

Click or tap to enter a date.

ID Number: 35

Acreage: 0.75 ac

Parcel Number:
006-00-00-060.00



Photo number: 12

Click or tap to enter a date.

ID Number: 37

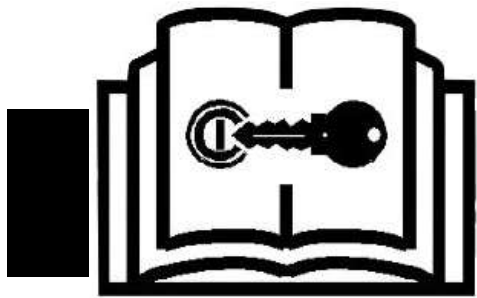
Acreage: 0.73 ac

Parcel Number:
006-00-00-057.00



PD10 Pile Driver

Operator's and Maintenance Manual



EN_o-m2_10 original instructions
Publication Date: 2025-05-06
Serial No. 1001 -
Order No. 105400CQ3
Cabled Assembly No. 296379241



Vermeer®

EQUIPPED TO
DO MORE.®

Sound and Vibration Levels



Levels for Deutz Engine Options

The stated sound levels are representative for a given operating condition. Operating conditions may vary at each jobsite. The actual sound levels for your application and operating conditions may be different.

Equivalent Continuous A-Weighted Sound Pressure at Operator's Ear
as determined by directive 2000/14/EC and ISO 6396. 114 dB(A)

Guaranteed Sound Power Level
as determined by directive 2000/14/EC, ISO 6395, ISO 3744 132 dB(A)

Whole Body Vibration according to ISO 2631-1less than 0.5 m/s²

Right and Left Hand/Arm Vibration according to ISO 5349less than 2.5 m/s²

Levels for Yanmar Engine Option

The stated sound levels are representative for a given operating condition. Operating conditions may vary at each jobsite. The actual sound levels for your application and operating conditions may be different.

Equivalent Continuous A-Weighted Sound Pressure at Operator's Ear
as determined by directive 2000/14/EC and ISO 6396. 105 dB(A)

Guaranteed Sound Power Level
as determined by directive 2000/14/EC, ISO 6395, ISO 3744 123 dB(A)

Whole Body Vibration according to ISO 2631-1less than 0.5 m/s²

Right and Left Hand/Arm Vibration according to ISO 5349less than 2.5 m/s²