

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

In the Matter of:

ELECTRONIC APPLICATION OF UNBRIDLED)	
SOLAR, LLC FOR A CERTIFICATE OF)	
CONSTRUCTION FOR AN APPROXIMATELY)	
160 MEGAWATT MERCHANT ELECTRIC)	CASE NO.
SOLAR GENERATING FACILITY AND)	2020-00242
NONREGULATED ELECTRIC)	
TRANSMISSION LINE IN HENDERSON AND)	
WEBSTER COUNTIES, KENTUCKY)	

ORDER

On December 8, 2020, Unbridled Solar, LLC (Unbridled) filed an application requesting a Certificate of Construction to construct an approximately 160-megawatt merchant electric solar generating facility and a related 161-kilovolt nonregulated transmission line in Henderson and Webster counties, Kentucky.¹ Unbridled is a limited liability company organized under the laws of Delaware with a principal place of business in Bloomington, Minnesota.² The total acreage within the generating facility project boundary is 1,680 acres that has been predominantly used for pasture and agriculture.³ The on-site equipment will consist of solar panels with a tracking system, inverters, substation, operations and maintenance building, parking lot, below- and above-ground electrical collection lines, up to six weather stations, and temporary construction laydown

¹ Application at 1.

² *Id.* at 2.

³ *Id.*, Exhibit I, Site Assessment Report (SAR), Item 1.2.1. and 1.2.3.

yards.⁴ For interconnection and sale into the wholesale market, Unbridled has also requested permission to construct a 161-kilovolt transmission line from the project substation in Webster County to the Big River Electric Corporation's Reid Substation, approximately two miles east of the project boundary in Webster County.⁵

Pursuant to an Order issued on December 23, 2020, a procedural schedule was established for the orderly review and processing of this matter. The procedural schedule provided for two rounds of discovery upon Unbridled's application, a deadline for the filing of the consultant's report, and an opportunity for Unbridled to submit comments in response to the consultant's report. The December 23, 2020 Order also scheduled a hearing for the matter that resulted in extending the statutory deadline for the processing of this matter from 120 days to 180 days from the date of the filing of the application.

Pursuant to 807 KAR 5:110, Section 4, requests to intervene had to be filed within 30 days from the date of the filing of the application. Also, pursuant to 807 KAR 5:110, Section 6, the Siting Board on its own motion or any party to this case may file a motion requesting an evidentiary hearing within 30 days from the date of the filing of the application. Under KRS 278.712(1), a request for a local public hearing may be requested by at least three interested persons that reside in Henderson and Webster counties or from the local planning and zoning commissions, mayors of the cities or counties' fiscal courts of the jurisdictions where the solar facility and transmission line are proposed to be located. Lastly, pursuant to 807 KAR 5:110, Section 8, a request for a public meeting must be made within 30 days from the date of the filing of the application. There have

⁴ Application, Exhibit B. See *also* Application, Exhibit I, SAR, Item 1.2.1.

⁵ *Id.*, Exhibit I, SAR, Item 1.2.2.

been no requests for intervention in this matter, no requests for an evidentiary hearing, and no requests for a public meeting or a local public hearing in this matter.

Unbridled has filed responses to multiple rounds of discovery in this matter. Pursuant to KRS 278.708(5), the Siting Board retained a consultant, BBC Research and Consulting (BBC), to review Unbridled's site assessment report (SAR) and to provide recommendations concerning the adequacy of the SAR and propose mitigation measures. A site visit was held on February 19, 2021. The BBC Report was filed on March 17, 2021. Unbridled submitted its response to the BBC Report on March 30, 2021. A formal evidentiary hearing was held on April 8, 2021. Upon approval for an extension of time, Unbridled filed responses to post-hearing data requests on April 19, 2021, and April 26, 2021. The Siting Board received public comments in support of and objecting to the proposed solar facility. The Siting Board received no public comments at the beginning of the April 8, 2021 formal evidentiary hearing. The matter now stands submitted for a decision.

PROPOSED UNBRIDLED SOLAR FACILITY AND TRANSMISSION LINE

The proposed solar generating facility will be located on approximately 1,680 combined acres on connected properties in Webster County (540 acres) and Henderson County (1,140 acres) near and within the 4 Star Industrial Park.⁶ No address has been established at this time for the facility.⁷ The facility will be located south of Kentucky Route 416 and west of Kentucky Highway 41, roughly north of Sebree and southwest of

⁶ Application, Exhibit B, Description of Proposed Solar Generation Facility Site.

⁷ *Id.*

Robards, Kentucky.⁸ The solar facility has a rated capacity of 160 MW and will ultimately be connected to the Big Rivers Electric Corporation's (BREC) Reid Substation for sale into the wholesale market. Unbridled states that a fence meeting the National Electrical Safety Code (NESC) and Henderson Ordinance requirements, seven foot in height with barbed or smooth wire at the top, will enclose the facility.⁹ Unbridled notes that the area surrounding and within the generating facility project site consists of agricultural lands and scattered rural homesteads.¹⁰

The proposed transmission line will begin at the substation located on the generating facility site and continue to the BREC Reid Substation about two miles east of the generating facility's boundary.¹¹ The transmission line will consist of steel monopoles 70–90 feet tall, spaced 300–500 feet apart.¹² Unbridled has entered into lease agreements with ten adjoining landowners to construct the transmission line.¹³

Pursuant to KRS 278.706(2)(c), Unbridled notified 63 landowners whose property borders the proposed solar facility site via certified mail on November 10, 2020.¹⁴ Unbridled also published notice of the proposed solar facility in *The Gleaner*, the newspaper of general circulation in Henderson County, on August 11, 2020, and *The*

⁸ Application, Exhibit I, SAR, Attachment D, Property Value Impact Study, Identification and Description of the Proposed Project at 7.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* at Item 1.2.1.

¹² *Id.*, Exhibit C, Description of Proposed Transmission Line and its Appurtenances.

¹³ Unbridled's Responses to Siting Board Staff's First Request for Information (filed Feb. 2, 2021), Amended Exhibit J, Figure 3C.

¹⁴ Application, Exhibit D, Public Notice Evidence and Report.

Journal-Enterprise, the newspaper of general circulation in Webster County, on August 12, 2020.¹⁵ In addition, Unbridled also engaged in public involvement program activities as required by KRS 278.706(2)(f) prior to the filing of its application. Unbridled states it met with the Henderson City-County Planning Commission and Henderson County Fiscal Court on multiple occasions in 2019 while the solar ordinance was being reviewed and approved.¹⁶ Unbridled held a virtual public meeting on August 26, 2020, to inform the public about the solar project and receive comments from the public.¹⁷ Unbridled published notice of the public meeting in the August 11, 2020 edition of *The Gleaner* and the August 12, 2020 edition of *The Journal-Enterprise* and also mailed letters to all adjoining landowners notifying them of the public meeting.¹⁸

DISCUSSION

I. Requirements Under KRS 278.708 – Site Assessment Report

KRS 278.704(1) states that “[n]o person shall commence to construct a merchant electric generating facility until that person has applied for and obtained a construction certificate for the facility from the [Siting] [B]oard.” KRS 278.708 requires a SAR be prepared and filed with an application. The SAR should provide (1) a detailed description of the proposed site; (2) an evaluation of the compatibility of the facility with scenic surroundings; (3) potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

the facility; (4) evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; (5) the impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility; and (6) any mitigating measures to be implemented by the applicant to minimize or avoid adverse effects identified in the site assessment report.

Detailed Site Description

The SAR specified in KRS 278.708 and required by KRS 278.706(2)(i) is provided as Exhibit I to Unbridled's application.¹⁹ The BBC consultant's report summarizes the SAR:

The SAR provides a description of Unbridled in terms of surrounding land uses, legal boundaries, access control, utility service, setback requirements, visual impacts, impacts on surrounding property owners, noise levels and traffic impacts. Unbridled is located in northwestern Kentucky, about twelve miles south of the City of Henderson and about 30 miles west of the City of Owensboro. Unbridled would be a 160-megawatt alternating current photovoltaic (PV) electricity generation facility, situated on agricultural and industrial lands. Facility equipment will consist of tempered glass solar panels, inverters, a new substation, associated wiring and a 3-mile, nonregulated transmission line.

Currently, approximately 85 percent of the land within the project boundary is used for agriculture with 82 percent for crops and 3 percent for pasture. There are 63 scattered residential parcels near the site, but the only "neighborhoods" as defined in KRS 278.700(6), are in Robards in Henderson County and in Sebree in Webster County. The nearest adjacent residences in Henderson County are located from 135 to 200 feet from the closest proposed solar panels. The southwestern portion of the site includes parcels that lie within the 4 Star Industrial Park Planning Parcels. The Big Rivers Electric Corporation coal-fired power plant is located across Interstate 69, about two miles from the southeastern portions

¹⁹ Application at 8.

of the site. Any access points from public roads will have locked gates and down-lit security lighting, and security cameras. Unbridled also stated that the Project will be surrounded by a 7-foot-tall fence, consisting of 6 feet of chain-link and topped by 1 foot of barbed and/or smooth wire for security, which meets the National Electric Code Article 110 and Henderson County Zoning Ordinance, Article XXX, Section 30.02.D, Solar Energy Systems requirement. The SAR states that “Electric and water/sewer services will likely be required by the O&M building.” In their response to Siting Board staff’s and BBC’s First Request for Information, Unbridled clarified that water service would be provided by the City of Henderson’s water system and a septic system would be used for wastewater disposal because municipal wastewater service is not available at the site. Unbridled did not specify which utility (if any) would provide electric service to the facility.²⁰

The site of the proposed project is in both Henderson and Webster Counties and must comply with the setback requirements of each county. In Henderson County, Level 3 Solar Energy Systems (SES), such as Unbridled must comply with the Henderson County Zoning Ordinance Art. XXX. Section 30.02 of the Zoning Ordinance requires that equipment must be at least 25 feet from the outer property lines of the project area and all SES equipment must be at least 100 feet from any residential structure. There are no local zoning codes that apply to the Webster County portions of the site. The applicable requirement from KRS 278.704(2) is that “. . . 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.” There are no residential neighborhoods, schools, hospitals or nursing homes within 2,000 feet of the proposed facilities or structures in Webster County. Legal boundaries; location of facility buildings, transmission lines, structures; location of access roads, internal roads and railways are all addressed in the SAR. Noise levels are briefly addressed and then evaluated more fully in a subsequent section of the SAR.

²⁰ See Unbridled’s Response to Siting Board Staff’s First Request (filed Feb. 2, 2021), Item 21. (Two electric distribution utilities serve the site: Kenergy and KU.)

According to the BBC Report, these materials appear to meet the requirements identified in KRS 278.708.

More detailed information regarding the location of structures and vegetation is available in the Preliminary Site Plan²¹ and the Site Plan dated April 13, 2021, approved by the Henderson City-Council Planning Commission on May 4, 2021.²²

The Siting Board finds that Unbridled's detailed description of the proposed solar facility site complies with the requirement set forth in KRS 278.708(3)(a).

Compatibility with Scenic Surroundings

Unbridled states that the proposed solar site is located between the towns of Sebree and Robards, Kentucky. Existing land use in the project area is predominantly cultivated crops, deciduous forest, developed open space, mixed forest (narrow wooded corridors along streams, fencerows, and property boundaries), and pasture or hay.²³ Narrow wooded corridors are located along streams, property boundaries, and fencerows. Farm buildings (stables, silos, barns, and homes) are also present in lots near the Project area.²⁴ Unbridled has presented a comparison to other solar farm sites, and states that the mix of residential and agricultural uses is very typical.²⁵

Unbridled acknowledges sections of the proposed project will be adjacent to residential properties and states that if a vegetative buffer is not already present between the facility boundary and the residential structure, one will be planted in compliance with

²¹ See *also* Amended Exhibit K (filed Feb. 2, 2021).

²² Unbridled's Notice of Filing for Documents Related to Site Plan Approval (filed May 14, 2021)

²³ Application, Exhibit I, SAR, Attachment B, Existing Land Use and Site Conditions at 26.

²⁴ *Id.*

²⁵ *Id.*, Exhibit I, SAR, Attachment D, Property Value Impact Report.

the Henderson County Ordinance Article XXX, Section 30.02.D, Solar Energy Systems requirement (Henderson Ordinance).²⁶ Unbridled has presented a screening plan including 41 buffers, ranging from 15 feet to 5,500 feet in length, the majority of which will be placed at the boundary of the facility, including evergreen and deciduous trees and shrubs.²⁷ Unbridled's screening plan has been approved by the Henderson City-County Planning Commission.²⁸ Unbridled has also stated that the proposed solar panels will be constructed of dark, light-absorbing materials with anti-reflective coatings, to limit light reflection.²⁹ Unbridled has presented a Glare Report which states that glare from the solar panels would not cause an adverse impact for drivers along Route 416 or Route 283 and ultimately found no impact to sensitive receptors from glare associated with the proposed facility infrastructure.³⁰

Unbridled states that it has worked closely with adjacent landowners who expressed concern over their view shed impacts in preparing the screening plan in order to mitigate potential visual impacts to the landowners' property and that screening plan agreements will be completed with the landowners prior to construction.³¹

The BBC Report finds that the visual setting and topography in the area consists of gently rolling and sparsely populated agricultural land.³² BBC states that, in general, it

²⁶ *Id.* at Item 2.2.1.

²⁷ *Id.*

²⁸ Unbridled's Notice of Filing for Documents Related to Site Plan Approval (filed May 14, 2021)

²⁹ Application, Exhibit B.

³⁰ *Id.* See also Application, Exhibit I, SAR, Attachment C, Glare Report.

³¹ *Id.* at Item 2.2.1.

³² BBC Report, Section C, at 31.

concur with Unbridled's statements that the proposed facility would not be incompatible with its surroundings from a scenic standpoint based on the topography of the site, which limits or eliminates visibility from some of the nearby homes, forested areas in some portions of the site which break up the views, and the industrial character of the southeastern portion of the site.³³ BBC also recognizes that solar facilities have a relatively low profile—similar to or lower than most single-family homes—and Unbridled has agreed to an extensive plan of installing numerous vegetative buffers to help screen the site from nearby homeowners, as well as committed to obtaining signed screening agreements with nearby neighbors.³⁴

The BBC Report recommends the following mitigation measures to address visual impacts.

1. Unbridled should complete screening plan agreements with nearby homeowners as stated in Section 2.2.1 of the SAR;
2. Unbridled should submit its screening plan for approval of the Henderson City-County Planning Commission, as required under the Henderson County Zoning Ordinance; and
3. Unbridled should carry out the screening plan and make sure the proposed new vegetative buffers are successfully established and develop as expected over time.

Having reviewed the record, the Siting Board finds that the proposed solar facility, with the existing topography of the surroundings, the solar facility's location, and Unbridled's commitment to working with adjacent landowners on the screening plan, will

³³ *Id.* at 11.

³⁴ *Id.*

mitigate the effects the proposed facility will have on the scenic surroundings of the site. Unbridled has already been granted approval by the Henderson City-County Planning Commission for its site plan and screening plan. The Siting Board finds that the remaining mitigation measures recommended in the BBC Report are reasonable and, therefore, will require Unbridled to implement the mitigation measures identified above.

Impact on Property Values

With respect to impact on property values, Unbridled submitted a Property Value Impact Report from a certified real estate appraiser that found that, based upon a comparative analysis, the solar facility will have no impact on the property values of abutting or adjacent residential or agricultural properties.³⁵ The report indicates that the solar facility would function in a harmonious manner with the nearby surroundings, which is mostly agricultural, and that operation of the solar facility would not generate the level of noise, odor, or traffic impacts to negatively impact the nearby surroundings as compared to a fossil fuel generating facility or other industrial facility.³⁶

The BBC Report notes that the central issue with respect to property values impact is whether, and to what extent, the development and operation of the Unbridled solar facility will cause nearby property values to change. The BBC Report reviewed Unbridled's Property Value Impact Report, noting that the report contained a comparative study analyzing data from numerous solar facilities across the country of property values in proximity to such facilities with similar homes that are not in close proximity. The BBC Report states that the analysis performed on behalf of Unbridled is similar to the approach

³⁵ Application, Exhibit I, SAR, Attachment D.

³⁶ *Id.*

by which appraisers commonly estimate residential property values. BBC also reviewed recent studies and articles on this subject and notes that no data or analysis has been provided to support the contention that solar developments have had an adverse impact on property values. The BBC Report points to a 2018 study conducted by the LBJ School of Public Affairs at the University of Texas, which involved a survey of public sector property appraisers in 430 counties with commercial solar facilities. This study found that a majority of survey respondents estimated a value impact of zero and geospatial analysis showed that relatively few homes would be impacted.³⁷ The BBC Report also reviewed a 2020 study completed by economists at the University of Rhode Island, which found that in areas of high population density, houses within a one-mile radius depreciate by about 1.7 percent following construction of a solar array.³⁸ However, the BBC Report states these findings were specific to solar sites in suburban areas. There was found to be no statistically significant impact on home prices in rural settings such as the areas surrounding the proposed Unbridled facility. Based upon a review of Unbridled's Site Assessment Report, discovery responses, independent research, and information collected from the site visit, the BBC Report concludes that the Unbridled solar facility will unlikely have any meaningful impacts on the property values of adjacent properties or other properties near the solar facility.

Having reviewed the record, the Siting Board finds that there is sufficient evidence to conclude that the proposed Unbridled solar facility will not have any adverse impact on nearby property values.

³⁷ BBC Report, Section C at 24–25.

³⁸ *Id.*, Section C at 25.

Impact on Roads, Railways, and Fugitive Dust

With respect to the impact on roads, railways, and fugitive dust, Unbridled's Noise and Traffic Study as part of its SAR notes that two major roadways are present on the borders of the Project area vicinity: KY-283, a two-lane road that runs north and south that runs through the western portion of the project area, and KY-416, a two-lane road that runs east and west located on the northern border of the Project area.³⁹ Both roads are very lightly travelled, with average daily traffic (ADT) of between 261 and 800 vehicles per day.⁴⁰ The Watkins School Road, also near the site, has even less traffic – 145 vehicles per day.

Unbridled states that during construction, a temporary increase in traffic volume associated with travel of construction laborers, delivery of construction equipment and materials, and delivery of solar panel components and equipment is anticipated. Traffic during construction is estimated to be approximately 75 to 100 pickup trucks, cars, or other types of employee vehicles onsite for the majority of construction. An average of 75 to 100 employee vehicles are expected per day, along with 10 to 20 semi-trucks per day, varying per day depending on time of construction and delivery timeline of equipment during construction. Overweight or oversized loads are unlikely. The study notes that increased traffic may be perceptible to area residents, which appears likely given the low volume of traffic currently occurring. The study also states, however, that the slight increase in volume is not expected to affect traffic function. The study further notes that slow-moving construction vehicles may also cause delays on smaller roads; however,

³⁹ Application, Exhibit I, SAR, Traffic Study at 32.

⁴⁰ *Id.*

these delays should be similar to the impact of farm equipment during planting or harvest and only occur during a relatively short construction delivery period.

Unbridled claims that significant degradation to the existing roadways is not anticipated for the proposed project, but the increase in localized traffic and the continued entry and exit of heavy trucks or equipment has the potential to result in additional wear of the existing roadway or shoulder of the two prospective entrances to the project site.

Unbridled will construct or improve access drives and internal roads as needed to accommodate appropriate vehicles and equipment to construct the proposed solar facility. Internal roads will be compacted gravel, which may result in an increase in airborne dust particles. During construction, water may be applied to the internal road system to reduce dust generation.

Unbridled states that after construction is complete, traffic impacts during the operations phase of the project will be negligible. A small maintenance crew will regularly drive through the area in pickup trucks to monitor and maintain the facilities as needed, but traffic function will not be impacted as a result.

The BBC Report finds that during construction, the traffic associated with the arrival and departure of construction workers and the delivery of materials and equipment to the site would have a noticeable effect on local traffic, particularly given the low levels of current traffic activity in proximity to the site and the large number of proposed access points to the site (15). However, during facility operations, the proposed Unbridled solar facility would have little or no perceptible effect on local traffic or local roads.

The BBC Report finds that the delivery of the two Main Power Transformers (MPTs) to the site is likely to be challenging and has the potential to damage local roads

or require reinforcement or other special measures. The BBC Report notes Unbridled's response to the Siting Board Staff's First Request, stating that the two MPTs will be the largest deliveries to site and will each weigh between 250,000 and 450,000 lbs. BBC points out that the primary roads located near the proposed project site, SR 416 and SR 283, are rated at 44,000 pounds per the Kentucky Transportation Cabinet (KYTC). Therefore, any vehicle loads exceeding this limit could subject the roadway and shoulder to damage or degradation. Additionally, potential routes to the site may also include local county roads, which could be susceptible to degradation from heavy loads. Unbridled has committed to paying for any damage caused to roadways as a result of its transport of materials to the site.⁴¹

Regarding the report's discussion of "Location and use of access ways, internal roads and railways," Unbridled initially stated it does not intend to use railways for any construction or operational activities.⁴² Unbridled later clarified and corrected its record by stating rails are typically used for oversized/overweight loads like the MPTs.⁴³ The supplier is responsible for creating and managing a transportation plan to bring equipment to the project site from their manufacturing facility, as well as obtaining all required oversized/overweight permits.⁴⁴ Delivery of equipment is currently scheduled too far out for any supplier to provide any commitment on rail use or a railhead location. Thus, to the extent a Supplier may utilize rail to ultimately deliver equipment or materials to the

⁴¹ Hearing Video Transcript (HVT) of the April 8, 2021 Hearing, 10:18:24.

⁴² Application, Exhibit I, SAR, Effect on Road, Railways, and Fugitive Dust at 14.

⁴³ Unbridled's Response to Siting Board Staff's Third Request (filed Mar. 12, 2021), Item 1.

⁴⁴ *Id.*

project site, Unbridled states that railways may be used.⁴⁵ Unbridled commits to coordinate with the supplier and with the Henderson and Webster counties' road departments and the KYTC to identify an appropriate route to the site for the MPTs.

The BBC Report makes no finding with respect to fugitive dust. However, in its responses to Siting Board Staff's First Request, Unbridled stated that the application of water and coverage of spoils may occur, and the vegetative buffer along the boundaries will also help to mitigate fugitive dust impacts to adjacent areas.⁴⁶

The BBC Report recommends the following mitigation measures to ensure that impacts to roadways will be kept to a minimum.

1. Unbridled should contact the KYTC as soon as feasible to discuss the transportation requirements and the KYTC's restrictions on SR 283 and SR 416. If the MPT delivery route requires an on-site assessment by KYTC before approval and permitting, Unbridled should allow as much time as possible for that process to occur.

2. Unbridled should contact the road departments of Henderson and Webster counties as soon as feasible. Any overweight or over dimensional loads on local roads should be approved by the relevant county, and it is likely that county roads could be more vulnerable to damage or degradation than state routes.

3. Unbridled should develop a detailed and site-tailored traffic management plan for the construction phase as soon as feasible. Given the number of access points to the site (15) as shown in the applicant's amended Exhibit K, it is likely that the site will

⁴⁵ *Id.*

⁴⁶ Unbridled's Response to Siting Board Staff's First Request (filed Feb. 2, 2021), Item 18.

require extensive signage and coordination of traffic management personnel during construction activity.

The Siting Board agrees with the mitigation measures recommended in the BBC Report, which were generally accepted by Unbridled, and will require Unbridled to implement those measures.

Anticipated Noise Level

According to Unbridled's Noise and Traffic Study,⁴⁷ the nearest sensitive sound receptors will be 100 feet from solar panels and 200 feet from inverters.⁴⁸ The closest noise receptor to any structure, a dwelling in Robards, will be located more than 500 feet north of the project area. The town of Robards along 2nd Street and Highway 416, near the northeastern section of the project area, contains a concentration of homes. The nearest dwelling in Robards will be located more than 500 feet north of the project area, and the nearest public sensitive receptor will be the Robards Christian Church located over 800 feet east of the nearest proposed solar panels.⁴⁹

Unbridled's Noise and Traffic Study indicates that the existing land use of the project area is predominantly cultivated crops, deciduous forest, developed open space, mixed forest including narrow wooded corridors along streams, fence rows, property boundaries, and pasture or hay. Farm buildings, including stables, silos, barns, and homes, are also present in lots near the project area. The existing sound sources transportation-related sound sources such as cars, trucks, and trains in addition to sounds

⁴⁷ Application, Site Assessment Report, Exhibit I, Attachment B, Noise and Traffic Study.

⁴⁸ *Id.* at 8.

⁴⁹ *Id.* at 5.

from farming and agricultural activities such as trucks, harvesters, tractors, and other farming equipment used during harvesting, baling operations, and transportation produce sound. Other baseline sounds more common in rural areas include livestock and wildlife (e.g., insects, birds, and frogs).⁵⁰

Unbridled states that the noisiest phase of construction is anticipated to be the foundations phase due to pile driver use. During this phase of construction, it is expected that the pile drivers would generate a maximum noise level and 101 A-weighted decibels (dBA) at a distance of 50 feet.⁵¹ Unbridled notes that construction activities will dissipate with distance and will be audible at varying levels, depending on the locations of the equipment and receptors and that construction activities will be sequenced; site preparation may occur at a portion of the site while pile driving occurs at a different location. These sound impacts will be temporary and limited to daytime hours.⁵²

When the solar facility is operating, there will be periodic noise associated with the relatively constant noise of inverters, the solar panel tracking system, and the substation transformer. The noise produced by the 42 to 46 inverters will be less than 59 dBA measured at 50 feet, which can be described as a hum and has roughly the same noise output of a household air conditioning unit.⁵³ All inverters will be setback at least 200 feet from property lines, in accordance with Henderson County Zoning Ordinance, Article XXX, Section 30.02.D.⁵⁴ The panel tracking motors on the solar panels will operate at 54

⁵⁰ *Id.* at 5–6.

⁵¹ *Id.* at 6.

⁵² *Id.*

⁵³ Application at 6.

⁵⁴ *Id.* at 7.

dBA measured at 50 feet.⁵⁵ The transformer located within the central portion of the project area will have a footprint of 150 feet by 150 feet.⁵⁶ The transformer is anticipated to produce noise emissions rated at 58 dBA at 50 feet.⁵⁷ Unbridled also points out that the nearest noise sensitive receptor to the transformer are approximately 800 feet from the substation.⁵⁸ Unbridled states that no sound generated by typical construction equipment will violate Henderson and Webster County ordinances.⁵⁹

The BBC Report notes that noise issues stem from construction activities and operational components of the solar facility. During construction, noise will include graders, bulldozers, excavators, dozers, dump trucks, and other equipment. During operation of the proposed solar facility, noise will be emitted from transformers, inverters, and the tracking motors that rotate the panels to track the sun. The report further notes that distance from noise emitters to noise receptors also matters, since the further a noise receptor from a noise emitter, the less noise impact overall.

The BBC Report utilizes the noise recommendations generated by the Center for Disease Control (CDC) and National Institute for Occupational Safety and Health (NIOSH) to gauge acceptable levels of sound. The CDC estimates that sound at 95 dBA can potentially damage hearing after about 50 minutes of exposure, and a 95 dBA sound is 10 times louder than the NIOSH recommended exposure limit of 85 dBA.

⁵⁵ *Id.*

⁵⁶ *Id.* at 8.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.* at 6.

The BBC Report concludes that although noise levels similar to existing conditions applies to most of the construction activity, the pneumatic pile drivers are an important exception. The noise from the pile drivers will be substantial for residences even further than 100 feet from the solar arrays. Based on sound attenuation estimates across open space, a residence would need to be at least 400 feet from the nearest pile driver in order to experience a sound of 83 dBA, just below the NIOSH recommended exposure limit.

The BBC Report notes the following proposed mitigation measures by Unbridled: Unbridled will remain in contact with nearby residents about any complaints related to noise levels and to ensure that noise levels are not unduly high once the pounding and placement of the solar panel racking begins. Any noise generator that creates noise levels in excess of 120 dBA at the property boundary will be considered unduly high. The BBC Report points out the Unbridled did not support a reasoning for establishing 120 dBA as a threshold and that the American Speech Language Hearing Association classifies 120 dBA as a dangerous noise and not safe for any period.

The BBC Report recommends the following mitigation measures to address any potential noise impacts.

1. Unbridled should contact homes within 500 feet of any pile driving activity and notify them in advance of the upcoming activity, its timing and anticipated duration, rather than waiting for complaints from those residents. It should also provide the opportunity for residents to ask questions or provide feedback, if desired

2. Unbridled should respond to any noise-related complaints from residents adjacent to the project boundary, and work with those residents to reduce noise-related concerns through careful scheduling or other means to the extent feasible.

The Siting Board further finds that the noise levels created during the construction phase could cause adverse impacts to the nearby property owners. The Siting Board finds that modification to reflect a construction time period—with no earlier start than 8 a.m. with a construction stop at 6 p.m. Monday through Saturday—should be made. To further ensure as little noise impacts as reasonably possible during the construction period, the Siting Board will require the following additional mitigation measures.

1. Unbridled should notify residents and businesses within 2,400 feet of the project boundary about the construction plan, the noise potential, and the mitigation plans at least one month prior to construction start.

2. Unbridled should remain in contact with nearby residents to confirm that noise levels are not unduly high or annoying after the pounding and placement of the solar panel racking begins and mitigate those effects as needed.

3. If the pile driving activity occurs within 1,500 feet of a noise sensitive receptor, Unbridled should implement a construction method that will suppress the noise generated during the pile driving process (i.e., semi-tractor and canvas method; sound blankets on fencing surrounding the solar site; or any other comparable method).⁶⁰

4. Unbridled should implement a Customer Resolution Program to address any complaints from surrounding landowners. Unbridled should also submit annually a status report associated with its Customer Resolution Program, providing, among other

⁶⁰ See Case No. 2020-00280, *Electronic Application of Ashwood Solar I, LLC for a Certificate of Construction for an Approximately 86 Megawatt Merchant Electric Solar Generating Facility in Lyon County, Kentucky Pursuant to KRS 278.700 and 807 KAR 5:110*, Ashwood Solar's Response to Siting Board Staff's Post-Hearing Request for Information (filed May 25, 2021), Item 2; See Also Case No. 2020-00206, *Electronic Application of EUG Fleming Solar LLC for a Certificate of Constructions for an Approximately 188 Megawatt Merchant Electric Solar Generating Facility in Fleming County, Kentucky Pursuant to KRS 278.700 AND 807 KAR 5:110* (Ky. PSC May 24, 2021) final Order.

things, the individual complaints, how Unbridled addressed those complaints, and the ultimate resolution of those complaints identifying whether the resolution was to the complainant's satisfaction.

5. Unbridled should place panels, inverters and substation equipment no closer to noise receptors than indicated in Unbridled's noise and traffic study.

Mitigation Measures Proposed by Unbridled

Unbridled's SAR contained the following mitigation measures that it plans to implement:

Compatibility with Scenic Surroundings

1. Unbridled representatives and neighboring residents of the project have discussed view shed impact concerns. To address these concerns, Unbridled prepared a screening plan and visual renderings that were reviewed by and discussed with the landowners who expressed concern. Screening plan agreements with these landowners will be finalized prior to construction.

2. Unbridled will plant a vegetative buffer in areas adjacent to non-participating residences. The buffer will consist of a mix of evergreen and deciduous trees and shrubs in accordance with the vegetative buffer locations indicated on the preliminary site layout plan. The evergreen and deciduous trees will be planted at a height of three feet or greater and will reach 20 feet or greater at maturity. The shrubs will be planted at a height of two feet or greater and will reach ten feet or greater at maturity. The vegetative buffer is subject to approval by the Henderson County Planning Commission.

3. In addition to the screening plan and visual renderings, Unbridled considered feedback from concerned landowners while designing the project's site plan

to ensure sufficient setbacks from homes of concern. The site plan was designed to alleviate concerns of impacts to the view shed from neighbors' homes and was discussed with the neighbors expressing concern.

4. A portion of leased land in the northeastern area of the project was not used in the site plan for the purpose of mitigating impacts to homes in the town of Robards to allow an existing row of vegetation to remain intact and act as an existing vegetative buffer.

Public Safety and Security

1. Unbridled will place "High Voltage Keep Out" or equivalent warning signs along the perimeter at approximately every 100 to 200 feet and at all gates or entrances.

2. Unbridled will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.

3. The fence surrounding the property boundary will be installed after grading of the site and before the main array installation begins. According to NESC regulations, the security fence will be installed prior to any electrical installation work. The substation and construction staging area will also have their own separate security fences installed.

Traffic and Fugitive Dust

1. Unbridled will apply best management practices regarding dust mitigation, including, but not limited to, water applied to internal roads as needed; internal roads compacted; internal roads constructed or improved as needed; loads of dirt and other air-pollution causing particles covered while in transit; and the implementation of revegetation measures and covering of spoil piles.

2. Unbridled will develop a traffic management plan to minimize the impacts of any traffic increase and keep roadways safe. Part of this traffic management plan will be to maintain all traffic and staging on-site. In addition, the traffic management plan will identify any noise concerns during the construction period and develop measures that will address those noise concerns.

3. Unbridled will remain in contact with nearby residents about any complaints related to noise levels and to ensure that noise levels are not unduly high once the pounding and placement of the solar panel racking begins. Any noise generator that creates noise levels in excess of 120 dBA at the property boundary will be considered unduly high.

4. Construction activities, processes, and deliveries will be limited to the hours of between 7 a.m. and 7 p.m. Monday through Saturday.

5. Unbridled will use appropriate signage and traffic signaling as needed to aid construction traffic and prevent severe traffic issues.

6. As needed, Unbridled will shuttle commuting construction workers.

7. Unbridled will inform and obtain permits from state and local road authorities as pertaining to any Class 21 vehicle transport to the site. Unbridled will also comply with those permit requirements and will coordinate with proper road officials prior to these trips.

8. Unbridled will fix or pay for damage resulting from any vehicle transport to the project site in accordance with all transportation permits obtained from state and local road authorities.

Decommissioning

1. Unbridled, its successors, or assigns will decommission the entire site and complete reclamation to its original or a superior state after the project has served its useful life. This mitigation requirement will be deferred if Unbridled continues with its currently proposed operation beyond 40 years.

2. Unbridled will provide Henderson County with a decommissioning financial surety in accordance with the Henderson County Zoning Ordinance, Article XXX, Section 30.02.G.

Additional Measures

1. Residents within 1,500 feet of the property boundaries of the Unbridled solar facility will be notified prior to the start of construction. Residents within 500 feet of the solar panels will be notified prior to the start of commercial operation. Each notification will include contact information for complaint resolution.

2. Unbridled will comply with all applicable conditions relating to electrical interconnection with utilities by following the Midcontinent Independent System Operator (MISO) interconnection process. Unbridled will also accept responsibility for appropriate costs that may result from its interconnecting with the electricity transmission grid consistent with the obligations imposed by KRS 278.212.

3. If Unbridled, its successors, or assigns retrofits the current proposed facility to produce solar energy beyond 40 years, it will demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts. Otherwise, a new SAR must be submitted for Siting Board review.

4. Unbridled, its successors, or assigns will prepare a new SAR for Siting Board review if the power producer intends to retire the currently proposed facility and employ a different technology.

The Siting Board has reviewed the mitigation measures that have either been proposed by Unbridled or measures that have been accepted by Unbridled in response to discovery requests or recommended in the BBC Report and have modified certain of those measures. The Siting Board finds that the mitigation measures as proposed and as modified are appropriate and reasonable.

The Siting Board finds that Unbridled's SAR complies with all of the statutory requirements of KRS 278.708 subject to the mitigation measures and conditions imposed in this Order and the attached Appendix A.

II. Requirements under KRS 278.710(1)

In addition to the evaluation of the factors contained in the SAR, KRS 278.710(1) directs the Siting Board to consider the following additional criteria in rendering its decision:

- Economic impact on the affected region and state;
- Existence of other generation facilities;
- Local planning and zoning requirements;
- Potential impact on the electricity transmission system;
- Compliance with statutory setback requirements; and
- History of environmental compliance.

Economic Impact on Affected Region and the State

According to Unbridled's economic impact report, the proposed solar facility will generate lasting and significant positive economic and fiscal impacts on the entire affected region and the state. Such impacts include the creation of hundreds of construction jobs, meaningful increases in annual tax revenues, and increased economic activity more generally in adjacent businesses. Unbridled states that the project will pay approximately \$0.8 million in Kentucky sales tax for materials required for construction and \$6.6 million in state and local taxes over the life of the proposed solar facility.⁶¹ In addition, Unbridled has committed to providing approximately \$640,000 to a local education fund over 20 years.⁶² The estimated capital cost of the facility is approximately \$250 million.⁶³

During the construction phase of the project, Unbridled estimates that approximately 294 total full-time equivalent jobs will be created, with 130 of those jobs directly linked to workers within Kentucky. The additional 164 jobs are the result of the indirect and induced impacts of the project.⁶⁴ The vast majority of these jobs will be filled by craft workers and contractors. The 130 jobs translate to a projected injection of approximately \$8.9 million in new wages into the economy, which will support local businesses, and approximately \$17.5 million across the state. The total economic impact of the project resulting from the construction phase is estimated to be \$37.7 million.⁶⁵ The

⁶¹ Application, Exhibit G, Attachment Section 6 at 8.

⁶² *Id.*

⁶³ *Id.* See also Exhibit D, Unbridled Solar Presentation at 18.

⁶⁴ *Id.* Exhibit G, Attachment Section 4, Table 2 at 6.

⁶⁵ *Id.*

project is estimated to create approximately four jobs in Henderson and Webster counties with \$234,000 in wages and total economic impact of \$505,000.⁶⁶

During the project operations phase, the proposed solar facility will create approximately five direct and nine total full-time equivalent jobs statewide. The new local long-term earnings estimates total \$570,000 for the Commonwealth and a total economic impact of \$1.1 million annually.⁶⁷ Less than one full-time equivalent job is estimated to be created in Henderson and Webster counties with estimated wages of \$8,000 and total economic impact of \$15,000 annually. However, Unbridled notes that the economic impacts for Henderson and Webster counties are scaled down from state wide estimates and likely underestimate the impacts. The jobs are to be filled by individuals who live nearby or will move nearby the project.⁶⁸

The BBC Report did not evaluate the proposed economic impact of the project.⁶⁹ Having reviewed the record, the Siting Board finds that the Unbridled solar facility will have a positive economic impact on the region and the state as a whole.

Existence of Other Generating Facilities

The location of Unbridled solar facility does not contain any other generating facilities, and Unbridled will not be able to interconnect its solar facility to that of a nearby existing transmission line. The interconnection site chosen is located at BREC's Reid Substation in Webster County approximately two miles east of the Project boundary.

⁶⁶ *Id.* Exhibit G, Attachment Section 4, Table 3 at 7.

⁶⁷ *Id.* Exhibit G, Attachment Section 4, Table 2 at 6.

⁶⁸ *Id.*

⁶⁹ See BBC Research and Consulting, *Review and Evaluation of Unbridled Solar LLC Site Assessment Report* (filed Mar. 17, 2021), Section C at 1.

Prior to committing to the proposed transmission line, Unbridled considered alternative paths. Unbridled first considered interconnecting at the existing Reid to Hopkins 161 kV transmission line. The Reid to Hopkins 161 kV transmission line is a pre-existing transmission line owned by BREC. It is located approximately one mile from the southeast boundary of the project. While in the process of acquiring the necessary easements along various paths to reach the Reid to Hopkins 161 kV transmission line, Unbridled found that some owners of the intervening properties were not interested in participating in the project. As a result, Unbridled pursued an alternative point of interconnection at the Reid Substation.

Unbridled chose to construct a 161 kilovolt (kV) nonregulated transmission line from the project substation in Henderson County to BREC's Reid Substation approximately two miles east of the project boundary in Webster County. A map showing the location of residential structures, schools, and public and private parks in relation to the proposed project is presented in Unbridled's application.⁷⁰ A preliminary site plan and map showing the project structures, associated facilities, and boundaries is also included with the application.⁷¹

The proposed transmission line is the most direct path from the Project to the Reid Substation. Additionally, the proposed transmission line is sited near existing transmission lines primarily due to the project's proximity to the Sebree Station Plant where the Reid Substation is located. Unbridled designed the proposed transmission line route to minimize impacts to existing infrastructure, such as transmission lines, pipelines,

⁷⁰ Application, Exhibit J, Figure 1.

⁷¹ *Id.*, Exhibit K.

railways, and roadways, and to cross these features in the preferred and permutable manner.

The maintained right-of-way corridor will be 125 feet wide and approximately 3.15 miles long from the project substation to the existing Reid Substation, and will require additional land for right-of-way.

Local Planning and Zoning Requirements

The proposed generating facility will be located in Webster and Henderson counties. Henderson County has enacted Henderson County Ordinance Article XXX, Section 30.02 (Henderson Ordinance), which contains a setback requirement that all equipment is 25 feet from the outer property lines of the project area, and that all Solar Energy Systems (SES) equipment is 100 feet from any residential structure. The Henderson Ordinance also establishes height restrictions for solar equipment, requirements for screening and vegetative buffers, and requirements for decommissioning. The Henderson County Planning Commission approved Unbridled's site plan on May 4, 2021.⁷²

Unbridled notes that Webster County has not enacted any zoning ordinances or setback requirements for the location of the Unbridled solar facility. However, Unbridled has committed to meeting the Henderson Ordinance requirements for the portion of the project in Webster County as well.⁷³

⁷² Unbridled's Notice of Filing for Documents Related to Site Plan Approval (filed May 14, 2021).

⁷³ HVT of the April 8, 2021 Hearing, 9:18:06, 9:20:23, 9:23:13, 10:05:50, 10:12:13.

Unbridled submitted as part of its application a certification that the proposed project will be in compliance with all local planning and zoning requirements that existed on the date the application was filed.⁷⁴

The Siting Board finds that Unbridled's certification that the proposed facility will meet all local planning and zoning requirements that existed on the date the application was filed satisfies the requirements of KRS 278.710(1)(e). The Siting Board would emphasize that Unbridled must maintain compliance with all Henderson Ordinance requirements throughout the entirety of the Project's construction and operation , including for those portions of the project that are located in Webster County.

Impact on Transmission System

Unbridled is sited within MISO Central Zone 6. The Unbridled Solar Facility is currently part of the MISO-Central-DPP2020 Cycle 1 and was assigned Queue Number J1619.⁷⁵ MISO is anticipated to begin DPP Phase 1 in March 2021, with Phase 1 study results projected to be complete in August 2021. DPP Phase 2 is scheduled to be complete in October 2021, and DPP Phase 3 is scheduled to be complete in March 2022. Prior to Unbridled's submission of its application to MISO, a third-party consultant conducted a transfer study to review the injection of Unbridled at the Reid Substation. The results of the transfer study indicated a favorable interconnection. Unbridled commits to a formal Feasibility Study Report and System Impact Study to be issued prior to project construction and states those studies will determine the potential impacts to the regional electric grid and the need for any network upgrades to mitigate potential impacts.

⁷⁴ *Id.*

⁷⁵ DPP stands for Definitive Planning Phase.

Unbridled acknowledges it is responsible for appropriate costs that may result from its interconnecting with the electricity transmission grid consistent with the obligations imposed by KRS 278.212.⁷⁶

The Siting Board recognizes that the Feasibility Study Report and System Impact Study will not be filed until after the issuance of this final Order. The Siting Board would note however, that the integrity of the transmission system and ratepayers of Kentucky are protected pursuant to MISO's interconnection requirements. Unbridled will be held accountable for any potential impact to the electric grid and will pay for any such impact or cost. The Siting Board will require that Unbridled file the Feasibility Study Report and System Impact Study once they are submitted.

Compliance with Setback Requirements

Unbridled's application acknowledges that KRS 278.706(2)(e) requires all proposed structures or facilities used for generation of electricity to be at least 2,000 feet from any residential neighborhood, school, hospital, or nursing home facility subject to a certain exception that is not applicable in this instance. KRS 278.700(6) defines "residential neighborhood" as a populated area of five or more acres containing at least one residential structure per acre. Unbridled Solar stated in its application that there are two clusters of residences near the southwest portion of the project, one in Henderson County and one in Webster County that may meet the definition in KRS 278.700(6) of a residential neighborhood within 2,000 feet of the proposed solar development. Unbridled

⁷⁶ Application Exhibit I, SAR, Item 6.2, Table 2.

Solar stated it would file a motion, pursuant to KRS 278.704(4), seeking a deviation from the 2,000 feet setback requirement.⁷⁷

On December 17, 2020, Unbridled Solar filed a notice acknowledging its statement in the application to file a motion for deviation of the 2,000-foot setback requirement in KRS 278.706(2)(e) and KRS 278.700(6). Unbridled Solar stated that no residential neighborhood in Webster County is closer than 2,000 feet of the solar generating facility.

Henderson County Zoning Ordinance Article XXX, Section 30.02, which regulates solar energy systems, requires all equipment must be at least 25 feet from the perimeter property lines of the project area, except interior property lines of multiple contiguous properties have no setback requirements, and all Solar Energy System equipment must be located at least 100 feet from any residential structure. Unbridled Solar applied for and received approval from the Henderson City-County Planning Commission.⁷⁸ Webster County does not have a planning and zoning commission with jurisdiction over the proposed project, however Unbridled Solar has designed the entire project to meet the requirements of the Henderson County Zoning Ordinance.⁷⁹ The project is not proposed to be located on the site of a former coal processing plant, and it will not use any waste coal as a fuel source.⁸⁰ The project site will not have any existing electricity generating facilities onsite and will not include any exhaust stacks or wind turbines.⁸¹

⁷⁷ *Id.* at 7.

⁷⁸ Notice of Filing of Documents Related to Approval of its Site Plan from the Henderson City-County Planning Commission, (filed May 14, 2021).

⁷⁹ Application, Exhibit E at 2.

⁸⁰ *Id.*

⁸¹ *Id.*

Therefore, the setback requirement of 1,000 feet from the property line of adjacent properties does not apply to the Webster County portion of the project. Pursuant to KRS 278.706(2)(e), all proposed structures or facilities used for generation of electricity must be 2,000 feet from any residential neighborhood, school, hospital or nursing home facility. There are no schools, hospitals, or nursing home facilities within 2,000 feet of any proposed Webster County structure or facility used for electricity generation.⁸²

Having reviewed the record and being otherwise sufficiently advised, the Siting Board finds that Unbridled Solar has demonstrated the proposed facility as designed and as located would meet the goals of the various statutes set forth in KRS 278.704(4).

Decommissioning

Unbridled states that it will decommission the entire site and complete reclamation to its original or a superior state after the project has served its useful life. However, Unbridled notes that this requirement will be deferred if Unbridled continues with its currently proposed operation beyond 40 years.⁸³ Unbridled has also committed to providing Henderson County with a decommissioning plan at the time of development, as well as a financial surety as required by the Henderson Ordinance. Unbridled has committed to the requirements under the Henderson Ordinance for the Webster County portion of the project as well⁸⁴ and the leases with landowners filed confidentially⁸⁵ in this matter also provide decommissioning requirements. The BBC Report does not suggest any further measures regarding decommissioning.

⁸² *Id.* and see Exhibit J, Figure 1.

⁸³ Application, Exhibit I, SAR, Item 6.2, Table 2.

⁸⁴ HVT of the April 8, 2021 Hearing, 10:12:13.

⁸⁵ Unbridled's Petition for Confidentiality and Notice of Filing Entirely Under Seal (filed Apr. 7, 2021)

The Siting Board finds that decommissioning is an important consideration to ensure the land used during the life of the proposed solar facility can be returned to its original use as well as ensuring that such an obligation can be properly enforced. Toward that end, the Siting Board finds that the decommissioning commitment by Unbridled to be appropriate and reasonable. The Siting Board will require Unbridled to provide proof of its financial surety as provided to Henderson County under the Henderson Ordinance, which should include language to address the bond's application to Webster County as well. In addition, the Siting Board will require the explicit or formal decommissioning plan that is to be filed pursuant to the Henderson Ordinance, as well as any updates to the same, also be filed with the Siting Board or its successors. Unbridled should also be required to review the bond filed with Henderson County every five years at Unbridled's expense to determine and update the cost of removal amount. These updates should be subsequently filed with the Siting Board.

Accordingly, the Siting Board will require Unbridled to implement the decommissioning measures set forth above as conditions of its grant of a certificate in this matter.

III. Requirements under KRS 278.714(2)

KRS 278.714 directs the Siting Board to consider the following criteria in rendering its decision in regards to construction of the unregulated transmission line as proposed by Unbridled:

- Location of proposed line and structures to support it;
- Proposed right-of-way limits;
- Existing property lines that will be crossed and names of owners;

- Distance from neighborhoods, schools, public and private parks;
- Voltages and capacities;
- Length of line;
- Terminal points;
- Substation connections
- Statement of compliance for construction and maintenance with engineering practices and the NESC.

Full Description of the Proposed Route of Transmission Line

Unbridled proposes to construct a new 161 kV electric transmission line to transmit the power generated by Unbridled to the existing BREC Reid Substation in Webster County approximately two miles east of the site boundary. The transmission line will begin at the proposed substation located within the central area of the site, exit from its east boundary in Webster County, and terminate at the existing BREC Reid Substation.⁸⁶ The total length of the proposed line, including the line within Unbridled's boundary, is 3.15 miles.⁸⁷ The transmission line poles are planned to be steel monopoles, 70 to 90 feet tall and spaced 300 to 500 feet apart. At crossings, larger transmission line structures may be used in addition to monopoles, such as H-frame structures.⁸⁸ The proposed route is Unbridled's second choice after finding that a shorter route from the southeastern corner of the site connecting to an existing Reid to Hopkins 161 kV transmission line was not feasible due to lack of support from landowners.⁸⁹ According to the BBC Report, the

⁸⁶ Application, Exhibit C.

⁸⁷ *Id.* at 8.

⁸⁸ *Id.*, Exhibit C.

⁸⁹ *Id.*

selected route appeared reasonable and the simplified route evaluation process was appropriate given the short length of the line and the logical result.⁹⁰ Unbridled has filed several maps for the proposed transmission line route.⁹¹

The proposed maintained right-of-way corridor will be 125 feet wide and approximately 3.15 miles long from the proposed substation to the existing Reid Substation. Current land use in the right-of-way corridor is primarily agricultural with some forested and developed areas. Agricultural land within the right-of-way can return to normal use by landowners upon the completion of construction of the transmission line.⁹² The maintained right-of-way corridor of 125 feet will center on the line. Unbridled has obtained negotiated easements to construct and operate the transmission line from all property owners along the proposed route.⁹³ The map in Amended Exhibit K, dated February 2021, filed February 2, 2021, Sheet UNB-T-100-01, shows the proposed transmission line route, its right-of-way, and the placement of poles. Unbridled asks for an adjustment to the right-of-way, up to 500 feet, be allowed as a mitigation measure, asserting that:

Subsurface conditions and other unanticipated construction issues may require some adaptation of the location of the single steel poll support structures or other appurtenances and of the route of the proposed transmission line. Applicant asks that a construction certificate for the nonregulated transmission line permit the constructed line to be within 500 feet in either direction of the line shown on the attached route maps (*e.g.*, Exhibit. K, Sheet UNB-T-

⁹⁰ BBC Report, Section C, page 2

⁹¹ See (1) Amended Exhibit K, dated February 2021, (filed Feb. 2, 2021), Sheet UNB-T-100-01, for the proposed route in its entirety; (2) Maps in the Application, Exhibit J, Figures 2.10, 2.5, and 2.6 for the proposed route within the Unbridled boundary; and (3) Maps in the Application, Exhibit J, Figures 2.6, 2.7, and 2.8 for the proposed route from Unbridled's boundary to the Reid substation.

⁹² Application, Exhibit C.

⁹³ Application at 9.

100-01) on the conditions that (a) the constructed line, its right-of-way, or other appurtenances not be on the property of a different landowner and (b) the owner of the property on which the line or appurtenances will be located agrees in writing to the changed location(s).⁹⁴

The BBC Report noted that it does not appear that the line could move any closer with that mitigation measure to the six residences located within 500 feet south of the proposed line, west of U.S. Highway 41, without crossing onto their properties.⁹⁵

In its response to the BBC Report, Unbridled committed to not moving the transmission line any closer to those residences.⁹⁶ Unbridled did, however, request up to 1,000 feet for deviation of the transmission line within the property of BREC.⁹⁷ Unbridled explains that BREC could require route changes outside of Unbridled's control, and that due to the number of transmission lines on BREC's property, such movement would result in no additional visual impacts and would conform with the NESC and any other applicable legal requirements.⁹⁸ The Siting Board finds that Unbridled's request for deviations of 500 feet and 1,000 feet as described above should be granted.

Unbridled submitted a map showing the existing property lines that the proposed transmission line will cross.⁹⁹ The line would cross ten leased properties on the route outside of the site boundaries. The names of property owners were redacted subject to the provisions of 807 KAR 5:001, Section 4(10)(a). The property owner names were later

⁹⁴ Application at 10.

⁹⁵ BBC Report, Section 3, at 3

⁹⁶ Unbridled's Response to BBC Report (filed Mar. 30, 2021) at 5.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Application, Exhibit J, Figure 3.

submitted as “Amended Exhibit J, Figure 3 Leased Property Owner Key” as a confidential document on February 2, 2021. An additional map showing the parcel for the BREC Reid substation was filed on April 2, 2021.

There are no schools, fire stations, or churches shown within one mile of the portion of the proposed electric transmission line.¹⁰⁰ There are no public or private parks within one mile of the proposed solar site and transmission line.¹⁰¹ There are no residential neighborhoods, where five or more acres contain at least one residential structure per acre, within one mile of the proposed transmission line, although there are residences. Eight residences are shown near the proposed transmission line outside of the site boundary.¹⁰² Six of those homes are approximately 400 feet south of the proposed transmission line. The scenic impact to those homes is partly mitigated by the electric distribution line which is closer to them, although the wooden poles used by that line are not as tall as the steel monopoles that would be used for Unbridled’s transmission line.¹⁰³

Detailed Description of the Proposed Transmission Line and Appurtenances

KRS 278.714(2)(c) states that a full description of the proposed electric transmission line and appurtenances is required, including the following: Initial and design voltages and capacities; Length of line; Terminal points; and Substation connections.

¹⁰⁰ Application, Figure J, Figure 1

¹⁰¹ Response to Siting Board Staff’s First Request, Item 19, and Response to BBC’s First Data Request, (filed Feb. 2, 2021), Item 8.

¹⁰² Application, Exhibit J, Figure 2.7

¹⁰³ Application, Exhibit C, at 2; see *also* BBC Report, Section C, at 2.

Unbridled proposes to build a 161 kV electric transmission line to transmit the power generated by the project to the existing BREC Reid Substation in Webster County approximately two miles east of the project boundary.¹⁰⁴ The transmission line will begin at the project substation located within the central area of the project site, exit from the east boundary of the property, and terminate at the existing Reid Substation in Webster County.¹⁰⁵ The maintained right-of-way corridor will be 125 feet wide and approximately 3.15 miles long from the project substation to the existing Reid Substation.¹⁰⁶ The current land use in the right-of-way corridor is primarily agricultural with some forested and developed areas and agricultural land within the right-of-way can return to normal use by landowners after construction of the transmission line is completed.¹⁰⁷ A few residences are located adjacent to the southern boundary of the transmission line right-of-way.¹⁰⁸ The transmission line poles are planned to be steel monopoles, 70 to 90 feet tall and spaced 300 to 500 feet apart.¹⁰⁹ At crossings, larger transmission line structures may be used in addition to monopoles, such as H-frame structures.¹¹⁰ A map showing the proposed transmission line route, the distance of the proposed line from residential neighborhoods, schools, and public and private parks within one mile of the proposed

¹⁰⁴ Application, Exhibit C at 1.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

facilities were provided.¹¹¹ Additionally the map shows existing property lines and identifies the owner of the property over which the line will cross.¹¹² Unbridled Solar provided a plan view of the transmission line and associated structures Exhibit K, Sheet UNB-T-100-01.

Compliance with National Electric Safety Code

KRS 278.714(2)(d) requires that the applicant provide a statement that the proposed electric transmission line and appurtenances will be constructed and maintained in accordance with accepted engineering practices and the NESC. In the application, Unbridled confirms that the proposed electric transmission line will be constructed and maintained in accordance with accepted engineering practices and the NESC.¹¹³

IV. Requirements under KRS 278.714(3)

The Siting Board is also tasked with examining the following additional criteria in rendering its decision regarding construction of the proposed transmission line:

Scenic Impact

For the proposed non-regulated transmission line, the project features under consideration for scenic compatibility include the proposed towers to support the transmission line, the approximately 3.15-mile route of the transmission line from the expected substation location within the proposed Unbridled generating facility to the

¹¹¹ *Id.* See also Exhibit J, Figures 2.6-2.8

¹¹² *Id.* See also Exhibit J, Figure 3

¹¹³ *Id.* at 2 and attached affidavit of Nathan Franzen.

terminus at the BREC existing Reid Substation, and the cleared right-of-way for the transmission line.¹¹⁴

As far as the route of the transmission line, Unbridled states that it considered alternative routes, and specifically considered interconnecting at the existing Reid to Hopkins 161 kV transmission line located about one mile southeast of the proposed solar generating plant boundary.¹¹⁵ However, Unbridled encountered resistance from some of the landowners whose property would have been crossed by that route. Unbridled states the route selected is the most direct path from the Project to the Reid Substation.¹¹⁶ Unbridled also states that it designed the proposed transmission line route to minimize impacts to existing infrastructure, such as transmission lines, pipelines, railways and roadways, and that it conducted surveys of environmental and sensitive features and sited the transmission line to minimize impacts to these features.¹¹⁷ Nearly all of the selected route from the eastern edge of the proposed Unbridled solar generating facility to the terminus at the Reid Substation is located on lands proposed for industrial use that lie within the Proposed 4 Star Industrial Park Planning Parcels.¹¹⁸ In this instance, the proposed transmission line is very short and, as noted above, follows the most direct path from the proposed substation within the Unbridled Solar generating facility to the Reid Substation at BREC. Any alternative, except for the connection to the existing Reid to

¹¹⁴ See BBC Report, Section A at 56.

¹¹⁵ Application at 10 and Exhibit C.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Application, Exhibit I, SAR at Item 1.1.

Hopkins line mentioned previously, which was ruled out because of landowner opposition, would likely have been longer and potentially more impactful.

The BBC Report makes the following observations:

Electric transmission and distribution lines are not an uncommon site in the area of the proposed transmission line. The 3.15-mile-long route of the proposed transmission line is situated within gently rolling and sparsely populated agricultural land along most of the route, and within more industrialized land along the final mile or so of the route to the BREC's Reid Substation. The majority of the land crossed by the proposed line has been previously cleared for agricultural use or industrial development, though portions of the right of way cross woodlands that may require clearing to establish and maintain the right of way. There are no residential neighborhoods, parks or schools in proximity to the proposed transmission line route. The line would be visible to travelers along some of the roads near the eastern edge of the proposed generating facility, including U.S. Highway 41 and Interstate 69. However, these roads are already crossed by other electric transmission and distribution lines. The view from the Interstate in the vicinity of the proposed transmission line crossing is dominated by BREC's coal plant just east of the highway and the many electric transmission lines connected to the Reid Substation at the plant. The proposed line appears unlikely to have an impact on the scenic perceptions of travelers along these roads. The most affected key observation points near the proposed transmission lines would likely be the six residences located within 500 feet south of the proposed line, west of U.S. Highway 41. The scenic impact from these homes is partly mitigated by the electric distribution line which is closer to them, though the wooden poles used by that line are not as tall as the steel monopoles that would be used for the Unbridled Solar transmission line. These homes are also in the same proximity to a portion of the 4 Star Industrial Park. Though those parcels have not yet been developed for industrial use, the expected future use of those lands would likely have more visual impact than the proposed transmission line.

The BBC Report finds that overall the proposed transmission line would not have a significant adverse impact on the scenic assets of Kentucky, although some simple mitigation strategies could reduce the visual impact on the handful of nearby homes.

The Siting Board finds that Unbridled should discuss potential screening plan agreements with the ten landowners leasing land to Unbridled for the transmission line in order to determine any screening strategies that might mitigate and reduce the visual impact to the affected residences and continue to address and complaints through the construction phase of the transmission line.

Compliance with all Legal Requirements

KRS 278.714(3) helps frame the decision to be made by the Siting Board for proposed nonregulated transmission lines:

Action to grant the certificate shall be based on the board's determination that the proposed route of the line will minimize significant adverse impact on the scenic assets of Kentucky and that the applicant will construct and maintain the line according to all applicable legal requirements. In addition, the board may consider the interstate benefits expected to be achieved by the proposed construction or modification of electric transmission facilities in the Commonwealth. If the board determines that locating the transmission line will result in significant degradation of scenic factors or if the board determines that the construction and maintenance of the line will be in violation of applicable legal requirements, the board may deny the application or condition the application's approval upon relocation of the route of the line, or changes in design or configuration of the line.

As previously discussed, the Siting Board finds that overall, the proposed transmission line would not have a significant adverse impact on the scenic assets of Kentucky. Unbridled has stated that it will comply with all applicable conditions relating to electrical interconnection with utilities by following the MISO interconnection

process.¹¹⁹ The Siting Board finds that Unbridled's proposed transmission line meets the requirements of KRS 278.714(3), subject to the mitigation measures and conditions imposed in this Order and the attached Appendix A.

CONCLUSION

After carefully considering the criteria outlined in KRS Chapter 278, the Siting Board finds that Unbridled has presented sufficient evidence to support the issuance of a Certificate to Construct the proposed merchant solar facility and unregulated transmission line. The Siting Board conditions its approval upon the continued compliance by Unbridled with all Henderson Ordinance requirements and full implementation of all mitigation measures described herein and listed in Appendix A to this Order. A map showing the location of the proposed solar generating facility is attached hereto as Appendix B.

IT IS THEREFORE ORDERED that:

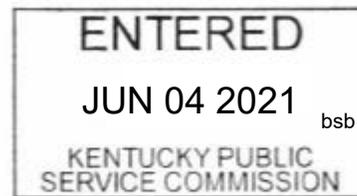
1. Unbridled's application for a Certificate to Construct an approximately 160 megawatt merchant solar electric generating facility and a 161-kilovolt nonregulated transmission line in Henderson and Webster counties, Kentucky, is conditionally granted subject to full compliance with the mitigation measures and conditions prescribed in Appendix A.
2. Unbridled's request to deviate 500 feet from the location of the proposed transmission line is granted, except for portions of the project on Big Rivers property, for which a 1,000 feet deviation is granted.

¹¹⁹ Application, Exhibit I, SAR Item 6.2, Table 2.

3. Unbridled shall fully comply with the mitigation measures and conditions prescribed in Appendix A.

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By the Kentucky State Board on Electric
Generation and Transmission Siting



ATTEST:

Executive Director
Public Service Commission
on behalf of the Kentucky State
Board on Electric Generation
and Transmission Siting

Case No. 2020-00242

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO. 2020-00242 DATED JUN 04 2021

MITIGATION MEASURES AND CONDITIONS IMPOSED

The following mitigation measures and conditions are hereby imposed on Unbridled Solar, LLC (Unbridled) to ensure that the facilities proposed in this proceeding are constructed as ordered.

1. Unbridled shall carry out the vegetation screening plan and make sure the proposed new vegetative buffers are successfully established and develop as expected over time.

2. Unbridled shall place "High Voltage Keep Out" or equivalent warning signs along the perimeter at approximately every 100 to 200 feet and at all gates or entrances.

3. Unbridled shall control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.

4. The fence surrounding the property boundary shall be installed after grading of the site and before the main array installation begins. According to NESC regulations, the security fence shall be installed prior to any electrical installation work. The substation and construction staging area shall also have their own separate security fences installed.

5. Unbridled shall apply best management practices regarding dust mitigation, including, but not limited to, water applied to internal roads as needed; internal roads compacted; internal roads constructed or improved as needed; loads of dirt and other air-pollution causing particles covered while in transit; and the implementation of revegetation measures and covering of spoil piles.

6. Unbridled shall develop a traffic management plan to minimize the impacts of any traffic increase and keep roadways safe. Part of this traffic management plan will be to maintain all traffic and staging onsite. In addition, the traffic management plan shall identify any noise concerns during the construction period and develop measures that will address those noise concerns.

7. Unbridled shall remain in contact with nearby residents about any complaints related to noise levels and to ensure that noise levels are not unduly high once the pounding and placement of the solar panel racking begins. Any noise generator that creates noise levels in excess of 120 decibels at the property boundary will be considered unduly high.

8. Unbridled shall use appropriate signage and traffic signaling as needed to aid construction traffic and prevent severe traffic issues.

9. As needed, Unbridled shall shuttle commuting construction workers.

10. Unbridled shall inform and obtain permits from state and local road authorities as pertaining to any Class 21 vehicle transport to the site. Unbridled shall also comply with those permit requirements and will coordinate with proper road officials prior to these trips.

11. Unbridled shall fix or pay for damage resulting from any vehicle transport to the project site in accordance with all transportation permits obtained from state and local road authorities.

12. Unbridled shall contact the KYTC as soon as feasible to discuss the transportation requirements and the KYTC's restrictions on SR 283 and SR 416. If the

MPT delivery route requires on-site assessment by KYTC before approval and permitting, Unbridled should allow as much time as possible for that process to occur.

13. Unbridled shall contact the road departments of Henderson and Webster counties as soon as feasible. Any overweight or over dimensional loads on local roads should be approved by the relevant county, and it is likely that county roads could be more vulnerable to damage or degradation than state routes.

14. Unbridled shall develop a detailed and site-tailored traffic management plan for the construction phase as soon as feasible. Given the number of access points to the site (15) as shown in the applicant's amended Exhibit K, it is likely that the site will require extensive signage and coordination of traffic management personnel during construction activity.

15. Unbridled shall contact homes within 500 feet of any pile driving activity and notify them in advance of the upcoming activity, its timing and anticipated duration, rather than waiting for complaints from those residents. Unbridled shall also provide the opportunity for residents to ask questions or provide feedback, if desired

16. Unbridled shall respond to any noise-related complaints from residents adjacent to the project boundary, and work with those residents to reduce noise-related concerns through careful scheduling or other means to the extent feasible.

17. Unbridled shall modify its construction time period to reflect no earlier start than 8 a.m. with a construction stop at 6 p.m., Monday through Saturday. .

18. Unbridled should notify residents and businesses within 2,400 feet of the project boundary about the construction plan, the noise potential, and the mitigation plans at least one month prior to construction start.

19. Unbridled should remain in contact with nearby residents to confirm that noise levels are not unduly high or annoying after the pounding and placement of the solar panel racking begins and mitigate those effects as needed

20. If the pile driving activity occurs within 1,500 feet of a noise sensitive receptor, Unbridled should implement a construction method that will suppress the noise generated during the pile driving process (i.e., semi-tractor and canvas method; sound blankets on fencing surrounding the solar site; or any other comparable method).¹

21. Unbridled should implement a Customer Resolution Program to address any complaints from surrounding landowners. Unbridled should also submit annually a status report associated with its Customer Resolution Program, providing, among other things, the individual complaints, how Unbridled addressed those complaints, and the ultimate resolution of those complaints identifying whether or not the resolution was to the complainant's satisfaction.

22. Unbridled should place panels, inverters and substation equipment no closer to noise receptors than indicated in Unbridled's noise and traffic study.

23. Unbridled shall file the Feasibility Study Report and System Impact Study into the record of this case once they are submitted.

24. Unbridled shall discuss potential screening plan agreements with the ten landowners leasing land to Unbridled for the transmission line in order to determine any

¹ See Case No. 2020-00280, *Electronic Application of Ashwood Solar I, LLC for a Certificate of Construction for an Approximately 86 Megawatt Merchant Electric Solar Generating Facility in Lyon County, Kentucky Pursuant to KRS 278.700 and 807 KAR 5:110*, Ashwood Solar's Response to Siting Board Staff's Post-Hearing Request for Information (filed May 25, 2021), Item 2; See Also Case No. 2020-00206, *Electronic Application of EUG Fleming Solar LLC for a Certificate of Constructions for an Approximately 188 Megawatt Merchant Electric Solar Generating Facility in Fleming County, Kentucky Pursuant to KRS 278.700 AND 807 KAR 5:110* (Ky. PSC May 24, 2021) final Order.

screening strategies that might mitigate and reduce the visual impact to the affected residences and continue to address and complaints through the construction phase of the transmission line.

25. Unbridled shall provide Henderson County with a decommissioning financial surety in accordance with the Henderson County Zoning Ordinance, Article XXX, Section 30.02.G

26. Unbridled shall file into the record of this case proof of its financial surety as provided to Henderson County under the Henderson Ordinance.

27. The formal decommissioning plan that is to be filed pursuant to the Henderson Ordinance, as well as any updates to the same, shall be filed with the Siting Board or its successors. Unbridled is required to review the bond filed with Henderson County every five years at Unbridled's expense to determine and update the cost of removal amount. These updates should be subsequently filed with the Siting Board.

28. Unbridled, its successors or assigns, will decommission the entire site and complete reclamation to its original or a superior state after the project has served its useful life.

29. Residents within 1,500 feet of the property boundaries of the Unbridled solar facility will be notified prior to the start of construction. Residents within 500 feet of the solar panels will be notified prior to the start of commercial operation. Each notification will include contact information for complaint resolution.

30. Unbridled shall comply with all applicable conditions relating to electrical interconnection with utilities by following the Midcontinent Independent System Operator (MISO) interconnection process. Unbridled shall also accept responsibility for appropriate

costs that may result from its interconnecting with the electricity transmission grid consistent with the obligations imposed by KRS 278.212.

31. If Unbridled, its successors or assigns, retrofits the current proposed facility to produce solar energy beyond 40 years, it will demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts. Otherwise, a new SAR must be submitted for Siting Board review.

32. Unbridled, its successors or assigns, shall prepare a new Site Assessment Report for Siting Board review if the power producer intends to retire the currently proposed facility and employ a different technology.

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO.
2020-00242 DATED JUN 04 2021

ONE PAGE TO FOLLOW

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