

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

In the Matter of:

ELECTRONIC APPLICATION OF GLOVER CREEK)	
SOLAR, LLC FOR A CONSTRUCTION)	
CERTIFICATE TO CONSTRUCT AN)	CASE NO.
APPROXIMATELY 55 MEGAWATT MERCHANT)	2020-00043
ELECTRIC SOLAR GENERATING FACILITY IN)	
METCALFE COUNTY, KENTUCKY PURSUANT TO)	
KRS 278.700 AND 807 KAR 5:110)	

ORDER

On March 27, 2020, Glover Creek Solar, LLC (Glover Creek) filed an application (Application) requesting a Certificate of Construction to construct a 55 megawatt alternating current (MWac) solar photovoltaic electric generating facility to be located in Summer Shade, Metcalfe County, Kentucky.¹ Glover Creek is a limited liability company and is based in Durham, North Carolina, with Carolina Solar Energy, III, LLC, also a North Carolina limited liability company, being the sole member of Glover Creek.² The footprint of the proposed solar facility is approximately 400 acres that has been historically used as pasture and crop land. The on-site equipment will consist of polycrystalline solar panels with a tracking system, an energy storage system, inverters, substation transformer, and associated wiring and balance of system.³ The facility's output will be

¹ Application at 1.

² *Id.*

³ Application Volume 1, Item 2, Description of Proposed Site.

transmitted and sold in the wholesale power market through the existing transmission line that crosses the property.⁴

Pursuant to a Siting Board Staff Notice issued on May 13, 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 Glover Creek's Application, a deadline for the filing of the consultant's report, and an opportunity for Glover Creek to submit comments in response to the consultant's report. The May 13, 2020 Siting Board Staff Notice also included a memorandum from Rebecca W. Goodman, Secretary, Energy and Environment Cabinet, extending the deadline for the processing of this matter to 180 days from the date of the filing of the application, pursuant to the authority delegated to Secretary Goodman under KRS Chapter 39A and the Governor's Executive Orders, including Executive Orders 2020-00243 and 2020-00257.

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 Metcalfe County or from the local planning and zoning commission, mayor of the city or county fiscal court of a jurisdiction where the solar facility is 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 been no requests for intervention in this

⁴ Application at 1.

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

Glover Creek has filed responses to multiple rounds of discovery in this matter. On April 20, 2020, Glover Creek filed a motion requesting deviations from certain setback requirements set forth in KRS 278.704(2). Pursuant to KRS 278.708(5), the Siting Board retained a consultant, Harvey Economics, to review Glover Creek'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 July 30, 2020. The Harvey Economics Report was filed on July 10, 2020. On July 24, 2020, Glover Creek submitted its response to the Harvey Economics Report.

There were no intervention requests, no intervenors, and no public comments submitted in this matter. The matter now stands submitted for a decision.

PROPOSED GLOVER CREEK SOLAR FACILITY

According to the Application, the proposed Glover Creek solar facility will be located at 7449 Randolph-Summer Shade Road, Summer Shade, Metcalfe County, Kentucky. The solar facility site is bounded by Summer Shade Road (SR 90) to the south and Randolph-Summer Shade Road (SR 640) to the east.⁵ The proposed site totals approximately 556 acres. Glover Creek has entered into lease agreements with three adjoining landowners⁶ to establish site control on enough usable acreage to match the maximum size solar project that Glover Creek calculated would be able to connect to one of the two electric transmission lines that run through the site. Glover Creek anticipates

⁵ Application Volume 1, Item 2, Description of Proposed Site.

⁶ Glover Creek's Response to Siting Board's First Request for Information (filed June 1, 2020), Item 2a.

using up to 400 acres for the installation of the necessary solar equipment and facilities. Glover Creek states that a fence meeting the National Electrical Safety Code (NESC) requirements, which is typically a six-foot fence with three strings of barbed wire at the top, will enclose the facility.⁷ Glover Creek further states that where there are potential visual impacts created by the solar facility, a 15-foot wide vegetative buffer will be planted consisting of two staggered rows of evergreen shrubs (such as Arborvitae Emerald Green) at least three feet in height at time of planting and growing to a maximum of 12 to 15 feet high.⁸ The solar facility has a rated capacity of 55 MWac and will be connected to East Kentucky Power Cooperative, Inc.'s (EKPC) Patton Road – Summer Shade 69 kV transmission line. The 69 kV line runs diagonally across the southern portion of the proposed site.⁹ The other transmission line is EKPC's Summer Shade – Barren County 161 kV, which runs diagonally across the northern portion of the site.¹⁰ The site will not connect to the 161 kV line. Glover Creek states that electric service during construction and operation will be provided by Farmers Rural Electric Cooperative Corporation.¹¹

Based on both acreage and parcels, the surrounding land use consists of agricultural/residential (69 percent), agricultural only (no residences 25 percent), and residential only (6 percent).¹²

⁷ Application Volume 1, Item 2, Description of Proposed Site.

⁸ *Id.*

⁹ Application Volume 1, Item 9, Effect on Kentucky Electricity Generation System.

¹⁰ Harvey Economics' Review of Glover Creek Solar LLC's Site Assessment Report for Solar Facilities in Metcalfe County, Kentucky (Harvey Economics Report) (filed July 10, 2020) at III-8.

¹¹ Glover Creek Solar, LLC's Response to Harvey Economics' Second Request for Information (filed June 29, 2020) Item IIG.

¹² Application Volume 2, Item 1, Description of Proposed Site.

Pursuant to KRS 278.706(2)(c), Glover Creek notified landowners whose property borders the proposed solar facility site once via U.S. regular mail and a second time via certified mail. Glover Creek also published notice of the proposed solar facility in the *Edmonton Herald News*, the newspaper of general circulation in Metcalfe County, on March 5, 2020.¹³ In addition, Glover Creek also engaged in public involvement program activities as required by KRS 278.706(2)(f) prior to the filing of its application. Glover Creek states that it held a public meeting on December 12, 2019, at the Metcalfe County Government Center, which is located in central Edmonton, to inform the public about the solar project and receive comments from the public. Glover Creek published notice of the public meeting in the November 21, 2019 edition of the *Edmonton Herald News*. Glover Creek indicates that it also mailed letters to adjoining landowners notifying them of the meeting.¹⁴ In addition to the public meeting, Glover Creek also held a neighborhood dinner on December 11, 2020. The dinner, held at the Edmonton City Grill, was for neighboring landowners and various local public officials. Glover Creek states that it had experts at the dinner to provide information regarding environmental health and safety of photovoltaics, specifics about the battery energy storage system, the impact of solar facilities on neighboring property values, economic impact of solar projects, and the construction, operation, and maintenance of the Glover Creek solar development.¹⁵ Glover Creek provided additional public involvement measures that were undertaken with respect to the proposed solar project, including, meeting with, and conducting a utility

¹³ Application Volume 1, Item 3, Public Notice Evidence.

¹⁴ Application Volume 1, Item 6, Public Notice Report.

¹⁵ *Id.*

scale solar workshop for local public officials; and meeting with neighboring property owners.¹⁶

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 Site Assessment Report 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 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

In addition to the description of the proposed solar facility as described above, Glover Creek states that the area around the project site can be generally described as rural, agricultural, with rolling hills and areas of trees. There are 28 individual parcels of

¹⁶ *Id.*

land, varying in size from less than one acre to more than 200 acres, located adjacent to the Glover Creek solar site. There are also 32 homes located within 1,000 feet of the Glover Creek facility boundaries. Nine homes are within 300 feet of the boundaries and five homes are within 300 feet of the nearest solar panels. Exact locations of some solar panels and the locations of the inverters, transformer, and energy storage system have not been finalized by Glover Creek but will be located at least 150 feet from the property boundaries. All site entrances on SR 90, SR 640, and Big Jack Road will be gated and locked when not in use.¹⁷ Security fencing, as described above, will enclose the facility during construction and operation. The Glover Creek facility's electric needs will be served by Farmers Rural Electric Cooperative Corporation during construction and operation.

The Harvey Economics Reports concludes that Glover Creek has generally complied with the legislative requirements for describing the facility and a site development plan, as required by KRS 278.708. The report recommends the following mitigation measures.

1. A final site layout plan should be submitted to the Siting Board upon completion of the final site design. Deviations from the preliminary site layout plan which formed the basis for the instant review should be clearly indicated on the revised graphic. Those changes might include location of solar panels, transformer/inverter/energy storage system groupings, panel motors, the substation, or other project facilities or infrastructure.

¹⁷ Application Volume 2, Appendix D.

2. Any change in Glover Creek's boundaries from the information which formed this evaluation should be submitted to the Siting Board for review.

3. The Siting Board will determine if any deviation in the boundaries or site development plan is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required; but if that is the case, Glover Creek will support the Siting Board's effort to revise its assessment of impacts and mitigation requirements.

4. Glover Creek 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.

5. 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 must be installed prior to any electrical installation work. The substation and construction staging area will also have their own separate security fences installed.¹⁸

The Siting Board finds that Glover Creek's detailed description of the proposed solar facility site complies with the requirement set forth in KRS 278.708(3)(a). The Siting Board also finds that the mitigation measures recommended in the Harvey Economics Report are reasonable and, therefore, will require Glover Creek to implement the mitigation measures identified above. The Siting Board further finds that the following additional mitigation measures should be implemented to ensure a comprehensive, robust, and accurate site development plan for the Glover Creek solar facility.

1. Glover Creek should post adequate signage to warn potential trespassers to ensure that access control measures will be consistent with industry standards.

¹⁸ Harvey Economics Report at III-12.

2. Glover Creek must ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the general public, local residents, and business owners.

Compatibility with Scenic Surroundings

Glover Creek states that the proposed site of the solar facility is located at a raised elevation surrounded by agricultural and residential properties. Due to the elevation difference and the existing vegetation, Glover Creek maintains that the solar facility will be shielded from view from most of the neighboring landowners. Glover Creek also states that its solar facility, which uses tracking panels, are a passive use of the land that would blend in with the nearby rural and residential area. Glover Creek asserts that the height of solar panels, which are generally 6 to 10 feet off the ground but no more than 12 feet high at maximum when they are tracking the sun, is similar to the height of a typical greenhouse and lower than a single story residential home. Glover Creek notes that, as compared to the proposed solar facility, if the subject property was developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as the proposed panels. Glover Creek further indicates that sections of the solar facility that adjoin roadways and other properties will have a vegetative buffer planted if one does not already exist. This 15-foot wide buffer will consist of two staggered rows of evergreen shrubs, which will be at least three feet in height at time of planting and will grow to approximately six feet in three years with continued growth thereafter. Lastly, Glover Creek states that it met with numerous landowners near the proposed solar site,

and the landowners had input in the placement of some of the visual buffers associated with the facility, including the cultivation of a pollinator area.¹⁹

At the request of Harvey Economics, Glover Creek also conducted a glare analysis comparing glare impacts from typical solar panels and solar panels coated with an anti-reflective coating at three different locations where drivers might be affected (no homes near the solar site would be exposed to glare). Because the areas to the north and west of the solar site are exclusively farmland, Glover Creek selected three key observation points where commuters may be able to see a small portion of the solar arrays, two of which are located on SR 640 and the third located to the southwest of the solar site on SR 90. The only potential glare issue identified was at the key observation point located on the northern most point of the project boundary along SR 640. This observation point may experience as many as 2,017 minutes of Green glare in one year, or about 34 hours over the course of a year.²⁰ For standard solar panels, this glare is expected to last 10-20 minutes per day between about 9:00 am and 9:20 am in the months of January, November, and December. Additional glare is expected to last one to ten minutes per day between about 8:40 am to 8:50 am for portions of the months of February and October. For anti-reflective solar panels, the anticipated glare will decrease from 2,017 minutes per year to 927 minutes per year, a decrease of 54 percent. Anti-reflective panels will reduce glare to five to ten minutes per day from the beginning of November to the end

¹⁹ Application Volume 1, Item 2, Description of Proposed Site.

²⁰ The glare study identifies the following three types of glares as measured by the Federal Aviation Administration:

Red Glare – this is the most severe rating for glare, which causes after-image.

Yellow Glare – this type of glare has the potential to cause temporary after-image.

Green Glare – this type of glare has low potential to cause temporary after-image.

of January. Glover Creek has not made a determination about purchasing anti-reflective panels at this time. It should be noted that the glare study indicates that this potential glare issue will only affect truckers after the first three years of the project as the impacts of glare are estimated at a height of ten feet and most traffic will not see most of the solar panels due to the six-foot high vegetative buffer.

The Harvey Economics Report finds that the visual setting surrounding the Glover Creek solar site is largely agricultural with few homes in close proximity to the site boundaries. The report also finds that rolling hills and clumps of trees will help protect against negative visual impacts to residents and commuters. Portions of the property where the solar facility is located is at a raised elevation to the surrounding rural agricultural and residential properties, which will help shield the project from certain viewpoints. The area towards the northeastern sections of the project (along SR 640) has fewer trees and is more open, but traffic volume on that road is relatively minimal. The report further states that the vegetative buffer proposed by Glover Creek and natural landscape will shield the majority of solar facilities from view of the residences that are closest in proximity to the site.

The Harvey Economics Report concludes that given the rural nature of the Summer Shade area, the number of people that will see the panels or other infrastructure will be very small; numerous clumps of trees and rolling hills will help the panels stay hidden from potential viewers; and the substation, which is the only building on the solar site, is hidden from nearly all viewing points. The report also concludes that glare will occur for fewer than 20 minutes per day during several winter months in one location on SR 640, which is a lightly traveled road. After three years, there should be virtually no

glare experienced by personal vehicles; only truckers may experience slight glare in the mornings. The Harvey Economics Report ultimately concludes that the Glover Creek solar facility will not result in adverse visual impacts to residents or commuters, especially given Glover Creek's commitment to vegetative buffers.

The Harvey Economics Report agrees with Glover Creek's proposed mitigation measures regarding the implementation of a vegetative buffer around certain areas of the solar site and the planting of at least two acres of native pollinator-friendly species within the solar facility site, among the solar panels. The report also agrees with Glover Creek's commitment to monitor the growth of the vegetative buffer, ensuring that its plantings are thriving to at least six feet in height.

Having reviewed the record, the Siting Board finds that the passive characteristics of the proposed solar facility combined with existing topography of the surroundings where the solar facility will be located as well as the trees and other vegetation in the area will significantly mitigate the effects the proposed facility will have on the scenic surroundings of the site. We note that the proposed site for the Glover Creek facility is significantly elevated and primarily surrounded by vegetation, both of which create a natural visual buffer for the facility. The physical characteristics of the solar facility also does not pose any adverse impact to the scenic surroundings given that the majority of the day the solar panels will be between six and ten feet high and will only be at the maximum height of 12 feet, which would be a lower profile than most single-family homes. Any potential scenic impact will be further mitigated by Glover Creek's commitment to implement a 15-foot wide vegetative buffer in areas adjacent the proposed site where there are no current vegetation.

While the Siting Board agrees with Glover Creek's proposed mitigation measures to reduce the visual impacts of the proposed solar facility, the Siting Board finds that the Glover Creek's current proposal of planting evergreen shrubs that will take at least three years to grow to full maturity does not ensure immediate mitigation of any visual or noise impacts from the solar facility. The Siting Board will modify the proposed mitigation measure to require Glover Creek to implement one of the following modified vegetative buffering options: (1) if Glover Creek elects to plant non-mature evergreen shrubs, Glover Creek should also include additional temporary buffers that would immediately help to mitigate noise and visual impacts until the evergreen shrubs have grown to maturity or (2) Glover Creek can elect to plant mature evergreen shrubs of at least 6 feet in height at the outset of the vegetative buffering process. Accordingly, the Siting Board will require Glover Creek to implement the vegetative buffer, as modified herein, and the two acre native pollinator area as described in the application.

Impact on Property Values

With respect to impact on property values, Glover Creek 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. 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.

The Harvey Economics Report evaluated the impacts to property values by reviewing relevant existing literature related to solar facility impacts; prepared further analysis of the data provided in Glover Creek's Property Value Impact Report; and conducted interviews with several real estate professionals. Among the literature reviewed by Harvey Economics was a 2018 University of Texas study, which included a geospatial analysis and a survey of residential property assessors to determine the potential for property value impacts related to solar projects. The results of the University of Texas study showed that a majority of survey respondents estimated a value impact of zero and geospatial analysis showed that relatively few homes would be impacted. Harvey Economics also reviewed a 2019 article produced by the American Planning Association, which indicates that the impact of utility-scale solar facilities is typically negligible on neighboring property values. Additional materials reviewed by Harvey Economics included several independent appraisal reports related to property value impacts for solar companies. The Harvey Economics Report states that overall conclusions of these independent appraisal reports were that solar facilities do not negatively impact property values.

In addition to reviewing the methodology and underlying matched pair analysis used in Glover Creek's Property Value Impact Report, Harvey Economics also examined more closely the data provided in the matched pair sets to determine the likelihood of a positive impact, negative impact, or no impact. Harvey Economics determined that the outcome of the evaluation of the solar facilities greater than 20 MW, which included 21 pair data set, indicates that over 80 percent of matched pair comparisons resulted in no

sales price difference or an increase in sales price due to adjacency to the solar facility property.

Harvey Economics also interviewed the Metcalfe County Property Valuation Administrator and a local real estate agent both of whom were familiar with the Glover Creek project. The Metcalfe County Property Valuation Administrator stated that it was difficult to project the impact the facility might have on property values. Although he has received no calls or heard any concerns from landowners related to the Glover Creek facility, he thought it would be difficult to identify any specific issues relating to the solar facility and changes in property values. The local real estate agent did not think that there would be any negative concerns or associations made in relation to the solar facility. His personal observation was that the solar facility would not deter buyers from the area or result in lower prices.

The Harvey Economics Report concludes that the current research indicates that the existence of solar facilities does not, in general, influence property values for adjacent landowners. The report notes that its own research, in combination with local interviews, point to a conclusion of no discernible impacts to property values. That conclusion, as stated in the report, is also supported by the specifics of operational activity at the Glover Creek facility, including minimal increased traffic or noise, no odors, panels which will be largely hidden from view by shrubbery, and no emissions of any kind. The Harvey Economics Report also concludes that the Glover Creek solar facility would not affect the current or future desired land uses of surrounding agricultural or residential properties in light of the operational characteristics of a solar facility. Accordingly, the Harvey

Economics Report does not recommend any mitigation measures related to potential impacts on property values or land use.

Having reviewed the record, the Siting Board finds that there is sufficient evidence to conclude that the proposed Glover Creek solar facility will more than likely not have any adverse impact on nearby property values. As we noted earlier, the characteristics of the solar facility's operations is passive in nature in that it does not produce any air, noise, waste, or water pollution nor does it create any traffic issues during operations.

The Siting Board agrees with the Harvey Economics Report's recommendation that a vegetative buffer, as modified above, would provide sufficient protection against any potential visual impacts of the proposed Glover Creek solar facility on adjoining property in terms of property values. The modified vegetative buffer should provide mitigation against adverse impacts to the scenic surroundings and to property values.

Impact on Roads, Railways, and Fugitive Dust

With respect to the impact on roads, railways, and fugitive dust, Glover Creek's Noise and Traffic Assessment as part of its SAR notes that the proposed solar facility is adjacent to two major roadways, SR 90 and SR 640. A third road, Big Jack Road, is a single-lane unpaved road that runs through the project site and connects SR 90 and SR 640. All equipment, materials, and personnel will be transported to the site via existing roads. Glover Creek will utilize SR 90 and SR 640 during the construction period and utilize Big Jack Road for access to the substation. There is no rail to the site.

It is expected that construction will take up to 8 to 12 months to complete the solar facility. Glover Creek's Traffic Study indicates that there are two average daily traffic (ADT) monitoring stations along SR 640 and along Hill Top View Road, which measures

vehicle traffic in both directions. The ADT for SR 640 mile point 1.62, which is located 10 feet from the solar site to the east, is 358. The ADT for Hill Top View Road mile point 0.14, which is 2,370 feet south of the solar site boundary, is 106. Glover Creek supplemented the traffic data to include two ADT stations along SR 90. The ADT for SR 90 at mile point 17.0490 is 5,960 and the ADT for SR 90 at mile point 4.7690 is 3,351.

Glover Creek anticipates a temporary increase in traffic near the vicinity of the solar site during construction activities. The increase in traffic will occur in the morning and evening when construction workers are entering and exiting the project site as well as periodic delivery of construction materials and equipment. Glover Creek estimates 40 to 150 workers will be on site throughout this period, with a peak of 250 workers. At the onset of mobilization, trucks will deliver heavy machinery to the site, and after that there will be daily truck deliveries of installation materials to the site. Heavy traffic will occur for the first few weeks after mobilization, but will slow towards the end of the installation period. Glover Creek states that there will be appropriate signage, signaling, flagmen, and temporary lane closures may be employed to increase driver safety and reduce the risk of any vehicle accidents. Glover Creek anticipates the potential of additional wear to the existing roads but no significant damages. Any damages resulting from the construction will be rectified. Glover Creek states that water may be applied during construction to reduce any potential dust generation. Glover Creek further states that land disturbing activities associated with the proposed project may temporarily contribute to airborne materials. To reduce wind erosion of recently disturbed areas, appropriate revegetation measures, application of water, or covering of spoil piles may occur. In

addition, any open-bodied truck transporting dirt will be covered when the vehicle is in motion.

During operations, Glover Creek states that the facility will be mostly un-manned with approximately two employees making site visits a few times a week to inspect the site, ensure proper equipment operation, and note any maintenance needs. Glover Creek further states that employees will be in mid- or full-sized trucks and will contribute less to vehicle traffic than a typical single-family home. According to Glover Creek, vehicular traffic on the project site will be limited to typical weekday work hours and will not significantly contribute to additional traffic in the project vicinity.

The Harvey Economics Report notes that traffic volumes associated with light duty commuter vehicles, including pickup trucks, during construction on an average day is 50 vehicles with a peak day volume of 90 vehicles. Traffic volumes associated with multiple axle trucks with trailers during construction on an average day is two trucks with a peak day volume of 15 trucks. Traffic volumes associated with Class 21 trucks, which are multiple axle trucks designed to carry very heavy cargo (e.g., substation transformer at a maximum weight of 120,000 pounds), are expected to make 11 total trips during construction.

The Harvey Economics Report concludes that traffic impacts during construction will be limited, but somewhat higher during the peak construction weeks. The report notes that there is the potential for traffic congestion to increase along SR 640, especially during the peak construction phase, but qualifies that this road has only modest traffic currently. Harvey Economics states that the entrance to the Glover Creek site from SR 640 should be able to handle the increase. The report finds that there should be no noticeable traffic

impacts during operations. With respect to fugitive dust, the report indicates that Glover Creek has pledged to properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process. Harvey Economics is of the opinion that this should keep dust impacts off site to a minimal level. With respect to road degradation, the report finds that this should not occur unduly from construction commuting and other vehicles except for the very large Class 21 truck trips. There are expected to be up to approximately 11 Class 21 truck trips, which will exceed the weight classification on roadways in the area. Harvey Economics concludes that road damage is quite possible from these vehicles.

The Harvey Economics Report identified the following mitigation measures that has either been proposed by Glover Creek or recommended by Harvey Economics and accepted by Glover Creek:

1. Glover Creek will use appropriate signage and traffic signaling as needed to aid construction traffic and prevent severe traffic issues.
2. As needed, Glover Creek will provide a temporary traffic signal at the intersection of SR 640 and SR 90.
3. As needed, Glover Creek will shuttle commuting construction workers.
4. Glover Creek's contractor 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; revegetation measures and covering of spoil piles.

5. Glover Creek will inform and obtain permits from State and local road authorities as pertaining to the Class 21 vehicle transport to the site. Glover Creek will also comply with those permit requirements.

6. Glover Creek will fix or pay for damage resulting from Class 21 vehicle transport to the project site and will coordinate with proper road officials prior to these trips.

The Siting Board finds that the 8 to 12 month construction phase of the Glover Creek solar facility would have an adverse impact on traffic during the peak morning and evening time periods particularly on SR 640. The Siting Board, however, finds there to be very little, if any, impact to SR 90 and SR 640 during the operational phase of the solar facility. The Siting Board agrees with the mitigation measures recommended in the Harvey Economics Report, which were accepted by Glover Creek, and will require Glover Creek to implement those measures. To further ensure that traffic impacts during construction are kept to a minimum, the Siting Board will also require Glover Creek to develop a traffic management plan to minimize the impacts of any traffic increase and keep traffic safe. Any such traffic management plan should also identify any noise concerns during the construction phase and develop measures that would address those noise concerns. The Siting Board will also require Glover Creek to limit the construction activity, process, and deliveries to the hours of 8 a.m. and 6 p.m. Monday through Saturday. These hours represent a reasonable timeframe to ensure that nearby property owners are not too impacted by the construction activities.

Anticipated Noise Level

Glover Creek submitted a Noise and Traffic Assessment,²¹ which found that noise during construction of the solar facility is expected to temporarily increase during daylight hours, and will be in the form of heavy equipment, passenger cars and trucks, and tool use during assembly of the solar facilities. Noise will be present on the project site during construction; however, due to the size of the project site and the distance to the nearest receptors, construction will not contribute to a significant noise increase when compared to noise currently occurring on site (such as the operation of farming equipment for livestock, hay production, and crop harvesting).

When the solar facility is operating, there will be periodic noise associated with the solar panel tracking system and the relatively constant noise of inverters. Glover Creek states that the increase in noise is negligible due to the distance of noise generating solar equipment from the nearest noise receptor and the implementation of two rows of evergreen shrubbery. The noise produced by the inverters is 67.0 dB measured at 10 meters (akin to a hum), which is slightly above that of a typical person-to-person conversation (i.e., 60.0), and will not be a contributor of noise to the nearest receptor (i.e., single-family home) located at 2,000+ feet away with a planted buffer and a strip of trees between the source and receptor. The panel tracking motors on the solar panels will operate at 78 dB (measured at 10 meters) no more than one minute out of every 15-minute period. Glover Creek further states that site visits and maintenance activities, such as mowing, will take place during daylight hours and will not significantly contribute to noise. The noise associated with these activities is very similar to those currently

²¹ Application Volume 2, Attachment C.

generated on-site by farming activities and off-site by commercial and farm uses. Glover Creek notes that Metcalfe County does not have any noise control ordinances currently in effect.²²

The Harvey Economics 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 Glover Creek operation, noise will be emitted from transformers, inverters, and the tracking motors which 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. Lastly, the report also points out that Metcalfe County and Summer Shade do not have any noise ordinances applicable to the project.

The Harvey Economics Report states that the areas surrounding the project site are dominated by active farmland, which contributes to noise typical of active hay production, crop planting and harvesting, and transportation of agricultural products and equipment. Other noises on-site include sounds from personal trucks and all-terrain vehicles. The report also points out that, according to the Glover Creek Noise and Traffic Assessment, those noises typically range from 80 to 120 dB during normal business hours.

The Harvey Economics Report concludes that during construction, almost all the noise from the Glover Creek site will be intermittent and will not be permanently damaging to nearby residents. According to Glover Creek's Noise and Traffic Assessment, baseline

²² Application Volume 1, Item 4. Compliance with Local Ordinances and Regulations.

noise levels in the area are about as loud as the construction noises. However, Harvey Economics notes that the tamping process that drives the solar posts into the ground will be particularly annoying for up to two and a half weeks, especially to the closest residences. Other construction equipment, especially earth-moving equipment (such as backhoes and bulldozers) will produce noises that is classified as annoying for residents within 1,500 feet from the originating sound. Thus, Harvey Economics finds that the construction phase has the potential to be annoying, but not harmful, to residents in the area for as many as eight months, based on the construction schedule provided by Glover Creek.

The Harvey Economics Report states that operational noises have the potential to impact a small number of nearby residences. The report notes that during operation, the co-located transformers and inverters are not expected to have a noticeable noise impact on residences due to distance and vegetative buffering. The transformers and inverters will be at least 200 feet away from the nearest residence, and the constant hum of the equipment (during the day) is anticipated to be less than what is classified as a nuisance or annoyance. However, the report finds that the solar panel tracker motors, which are louder than the transformers and inverters and will be closer to residences, might create an annoying noise impact for a small number of residents.

The Harvey Economics Reports recommends the following mitigation measures to address any potential noise impacts.

1. Residents within 1,500 feet of the property boundaries of the Glover Creek solar facility should be notified about potential construction noises. Residents within 500 feet of the solar panels should be notified about potential operational noises.

2. Glover Creek 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. Any noise generator that creates noise levels in excess of 120 dB should be considered unduly high or annoying.

3. If noise levels during this period are unacceptable to nearby residents or landowners (i.e., noise levels greater than 120 dB), Glover Creek will take such steps to mitigate the noise impact.

4. Glover Creek should contact nearby residents to confirm that noise levels are not unduly high or annoying after operations begin. Any noise generator that creates noise levels in excess of 120 dB should be considered unduly high or annoying.

5. Glover Creek should consider, among other things, additional buffering, fencing, or revising the construction schedules or delivery patterns in those areas where noise impacts are annoying residents or will potentially annoy them.

The Siting Board finds that while the noise levels during the operational phase of the Glover Creek Solar facility will not create any issues, the noise levels created during the construction phase would cause adverse impacts to the nearby property owners. The Siting Board agrees with the mitigation measures recommended in the Harvey Economics Report and will require Glover Creek to implement those measures. 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. During the construction process, construction activity and delivery of materials to the site should be limited to the hours between 8 a.m. and 6 p.m. Monday through Saturday.

2. Glover Creek should implement the modified vegetative buffers to those properties that are within 1,500 feet of the solar facilities' boundary lines before the tamping of the racking panels and Glover Creek should schedule the tamping process at these nearby homes so that the tamping will occur at the end of the tamping process period.

Mitigation Measures Proposed by Glover Creek

Glover Creek's SAR contained the following mitigation measures that it plans to implement.

1. Planting of native evergreen species as a visual buffer to mitigate view shed impacts. Plantings to primarily be in areas directly adjacent to the project without existing vegetation. In addition, Glover Creek has met with neighbors to discuss specific view shed concerns and to provide visual buffers to address to specific concerns.

2. Cultivation of at least two acres of native pollinator-friendly species on-site.

3. Completion of an Environmental Site Assessment Phase 1 for the site, which was submitted with the instant application.

The Siting Board has reviewed the mitigation measures that have either been proposed by Glover Creek or measures that have been accepted by the applicant in response to discovery requests or recommended in the BBC Report and have modified those measures associated with the implementation of the vegetative buffer. The Siting Board finds that the mitigation measures as proposed and as modified are appropriate and reasonable.

The Siting Board finds that Glover Creek'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 Site Assessment Report, 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 Glover Creek's economic impact analysis, the proposed solar facility will generate lasting and significant positive economic and fiscal impacts on the entire affected region and the state. Such impacts includes the creation of hundreds of construction jobs, expansion of the local tax base, and the benefits of having a long-term employer and corporate citizen in the region that has a strong commitment to investing in the communities it serves. Glover Creek states that the project will pay approximately \$1 million in county property taxes over the first 20 years of operation, with ongoing county tax payments continuing after this period.

During construction, Glover Creek estimates that approximately 450 total jobs will be created, consisting of 300 direct jobs and 150 indirect jobs. The vast majority of these jobs will be filled by craft workers and contractors. The 450 jobs translate to a projected injection of approximately \$15 million in new wages into the local economy, which will

support local businesses, and a labor income multiplier impact of an additional \$2.31 million. The total construction phase economic impact of the Glover Creek facility (exclusive of capital investment and tax revenues) is projected to be approximately \$17.31 million.

The Harvey Economics Report determined that the construction and operation of the Glover Creek Solar facility will provide some, limited economic benefits to the region and to the state. The report states that overall, the Glover Creek project will result in measurable, but temporary, positive economic effects to the region during the construction phase. Harvey Economics found that construction activity will generate regional employment and income opportunities; those effects will be temporary, but local hires will increase employment and incomes to an area which needs it. During the operational phase, the report finds that operational benefits will be confined mostly to property taxes. Lastly, the report notes that operational employment will be minimal, and purchases of materials or supplies will be very small on an annual basis.

Having reviewed the record, the Siting Board finds that the Glover Creek solar facility will have a positive economic impact on the region. The Siting Board notes that the solar facility will be one of the very few utility-scale renewable generation resource in the state and will be the largest solar facility in the state.

Existence of Other Generating Facilities

Glover Creek states that it is rare for utility-scale solar projects to be co-located with existing electricity generating infrastructure, such as a coal or natural gas-fired power plant.²³ As a result of Glover Creek's efforts, the proposed solar project is located on land

²³ Application Volume 1, Item 7, Efforts to locate near Existing Electric Generation.

with existing transmission lines. Glover Creek informs that the project will interconnect to an on-site, existing transmission line owned by EKPC. At the project's expense, EKPC will build a new tap line to interconnect the solar facility. The proposed interconnection is to on-site, existing infrastructure owned by EKPC to be used for the sale and distribution of energy created by the Glover Creek solar facility.²⁴

KRS 278.710(1)(d) provides that the Siting Board must consider whether a merchant plant is proposed for a site upon which facilities capable of generating 10 MW or more of electricity are currently located. Although the site upon which the Glover Creek solar facility will be located does not contain any other generating facilities, the Siting Board notes the selected site will encompass an existing transmission line and Glover Creek will be able to directly interconnect its solar facility to that of the existing transmission line without the need for any additional land. Also, as previously determined, the passive characteristics of the solar facility will be substantially compatible with the surrounding area.

Local Planning and Zoning Requirements

Glover Creek states that the proposed solar facility will be located entirely in Metcalfe County. Glover Creek notes that Metcalfe County has not enacted any zoning ordinances or setback requirements for the location of the Glover Creek solar facility. Glover Creek informs that there are no setback requirements established by a planning and zoning commission for the location of the project. Glover Creek 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.

²⁴ *Id.*

The Siting Board finds that Glover Creek'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).

Impact on Transmission System

Glover Creek states that the proposed solar facility will be located within the PJM Interconnection LLC (PJM) footprint. Glover Creek informs that PJM is the Regional Transmission Organization for 13 states, including parts of Kentucky, and is therefore managing the interconnection of the project in coordination with EKPC, who owns the transmission infrastructure to which the project is proposing to interconnect.²⁵ The interconnection study process for PJM involves three study phases: Feasibility Study, System Impact Study, and Facilities Study. The purpose of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the proposed Glover Creek solar facility to the PJM network at a location specified by Glover Creek. PJM issued the Feasibility Study Reports on the Glover Creek project in July 2019 and identified that the proposed solar project will require approximately \$6 million in upgrade costs to interconnect with EKPC's existing Patton Road – Summer Shade 69 kV transmission line. The upgrades consist of attachment facilities along with direct (construction of a switching station) and non-direct (relay upgrades) connection network upgrade. The Feasibility Study Reports also identified the need to system upgrades as a result of the interconnection which is estimated to cost Glover Creek approximately \$15 million. The biggest portion of this cost will involve the need to rebuild the Barren County – Horse Cave Junction 69 kV transmission line section; rebuild the AE2-071 – Summer

²⁵ Application Volume 1, Attachment E.

Shade 69 kV transmission line; and rebuild the Horse Cave Junction – Munfordville 69 kV transmission line.²⁶

The System Impact Study determines potential impacts to the regional electric grid and the need for any network upgrades to mitigate potential impacts. PJM issued the System Impact Study Report for the Glover Creek solar facility in January 2020 and found that Glover Creek will be responsible for approximately \$7.135 million in system upgrades. These system upgrades consists of \$610,000 for attachment facilities (69 kV isolation switch structure and associated switch); \$5.420 million in direct connection network upgrades (construct a new 69 kV switching station to 161 kV standards); \$795,000 in non-direct connection network upgrades (construct looping facilities); and \$310,000 in allocation for new system upgrades.²⁷

Glover Creek also requested LG&E to perform an affected system study in connection with the Glover Creek solar facility. Glover Creek states that LG&E's evaluation found that LG&E's system is not affected by the Glover Creek solar facility.²⁸

Glover Creek states that the Facilities Study is currently underway and expected to be issued in September 2020.²⁹ Based upon information provided by PJM, Glover Creek informs that the Facilities Study encompasses the engineering design work necessary to begin construction of required expansion plan upgrades identified by PJM to accommodate an interconnection request. Glover Creek does not anticipate any issues resulting from this study.

²⁶ Application Volume 1, Attachment G.

²⁷ Application Volume 1, Attachment F.

²⁸ Application Volume 1, Attachment D.

²⁹ Application Volume 1, Item 9, Effect on Kentucky Electricity Generation System.

KRS 278.710(f) provides that the Siting Board should consider whether the additional load imposed upon the electricity transmission system by use of the Glover Creek solar facility will adversely affect the reliability of service for retail customers of electric utilities regulated by the Public Service Commission (PSC). Having reviewed the record, the Siting Board finds that the proposed solar facility will not adversely impact the reliability of service provided by retail electric utilities under the PSC's jurisdiction based upon Glover Creek's commitment to the interconnection process and protocols and its acceptance of any cost obligations resulting from the interconnection process and protocols consistent with the requirements under KRS 278.212. The Siting Board finds that Glover Creek has satisfied the requirements of KRS 278.710(f).

Compliance with Setback Requirements

Glover Creek'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. Glover Creek states that there are two residential neighborhoods within 2,000 feet of the proposed solar development. Glover Creek filed a motion, pursuant to KRS 278.704(4), seeking a deviation from the 2,000 feet setback requirement.³⁰ The two nearby residential neighborhoods are described as follows:

1. The closest residential neighborhood to the solar facility is designated as Neighborhood A and is located along SR 90 west of Big Jack Road. Neighborhood A has

³⁰ Applicant's Motion for Deviation from Setback Requirements (Motion) (filed Apr. 20, 2020).

approximately 15 single family homes and is about 800 feet from Glover Creek's boundary. Neighborhood A is separated by SR 90 and a part of that neighborhood is located south of SR 90.

2. The second residential neighborhood is designated by Glover Creek as Neighborhood B and is approximately 1,400 feet from the solar facility's boundary. Neighborhood B runs along Summer Shade Road, including Bowman Estates and Whitlow Road. Neighborhood B is separated by SR 90 and a part of that neighborhood is located south of SR 90.³¹

KRS 278.704(4) provides that the Siting Board may grant a deviation from the setback requirements if it is determined that the proposed facility as designed and as located would meet the goals of KRS 224.10-280 (Cumulative Environmental Assessment) 278.010 (definitions), 278.212 (costs of upgrading existing grid), 278.214 (curtailment of service), 278.216 (site assessment report), 278.218 (transfer of ownership), and 278.700 to 278.716 (Siting Board requirements) at a distance closer than the required 2,000 feet.

Subject to certain exceptions not applicable in this matter, KRS 224.10-280 requires a person to submit a cumulative environmental assessment (CEA) to the Kentucky Energy and Environment Cabinet (Cabinet) along with a fee before beginning construction of an electric power plant. Although it is unaware of any regulations that have been promulgated regarding CEAs, including any regulations that would establish a fee for the processing of a CEA, Glover Creek developed a CEA for submission to the Cabinet. Glover Creek states that the CEA provides an in-depth analysis of the potential

³¹ Application Volume 2, Exhibit B.

air pollutants, water pollutants, wastes, and water withdrawal associated with the proposed merchant solar facility. The CEA shows that the Glover Creek solar facility will produce zero emissions and is not expected to emit any of the criteria pollutants such as particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxide, volatile organic contaminants, or lead. Although there will be some indirect air emissions during construction and operations from the use of vehicles and mowing, respectively, no air quality permit is required for these construction or ancillary activities. With respect to water pollutants, the CEA shows that the Glover Creek solar facility will result in the discharge of stormwater during construction.³² Glover Creek states that it intends to comply with the Kentucky Division of Water's Construction (KDOW) Storm Water Discharge General Permit for those construction activities that disturb one acre or more.³³ Glover Creek also will submit a Notice of Intent prior to the commencement of construction and a notice of termination upon completion. Glover Creek will use stormwater best management practices, such as silt fences, to manage stormwater during construction. Lastly, a stormwater pollution prevention plan also will be prepared and implemented to comply with KDOW requirements.

With respect to waste evaluation, the CEA notes that construction activities will generate solid waste consisting of construction debris and general trash, such as wooden crates, pallets, flattened cardboard module boxes, plastic packaging, and excess electrical wiring. To the extent, feasible, and practicable, Glover Creek will recycle

³² Motion at 6 and Exhibit 3.

³³ Glover Creek's Response to Siting Board's First Request for Information (filed June 1, 2020), Exhibit J.

construction waste and material that cannot be recycled will be disposed off-site at a permitted facility. The project will also generate very small amounts of hazardous waste, which will be managed off-site at a permitted facility.³⁴

With respect to managing water withdrawal and usage, the Glover Creek solar facility will primarily utilize groundwater from existing onsite wells to provide water needed for construction activities. Construction-related water use would support site preparation (including dust control, if applicable) and grading activities. Similar to other solar facilities, the Glover Creek project is not water intensive during the operational phase.

Glover Creek states that, based upon the CEA submitted to the Cabinet, the goals of the requirements of KRS 224.10-280 have been met.

With respect to KRS 278.010, Glover Creek states that this statutory provision sets forth the 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. Glover Creek asserts that the Siting Board's authority begins with KRS 278.700 and extends through KRS 278.716 and any applicable provision of 278.990. Glover Creek contends that in filing a complete Application pursuant to the applicable statutes in this proceeding, the company has satisfied the goal of providing the required information utilizing the definition of any applicable term defined in KRS 278.010.

KRS 278.212 requires the filing of plans and specifications for electrical interconnection with merchant electric generating facility and imposes the obligation upon a merchant electric generating developer for any costs or expenses associated with upgrading the existing electricity transmission grid as a result of the additional load

³⁴ Application Volume 2, Exhibit A.

caused by a merchant electric generating facility. Glover Creek avers that it has met the goals of KRS 278.212 because Glover Creek will comply with all applicable conditions relating to electrical interconnection with utilities by following the PJM interconnection process. Additionally, Glover Creek states that it will accept responsibility for appropriate costs which may result from its interconnecting with the electricity transmission grid.³⁵

KRS 278.214 governs the curtailment of service and establishes the progression of entities whose service may be interrupted or curtailed pursuant to an emergency or other event. Glover Creek states that it will abide by the requirements of this provision to the extent that these requirements are applicable.

KRS 278.216 requires utilities under the jurisdiction of the Kentucky Public Service Commission to obtain a site compatibility certificate before beginning construction of an electric generating facility capable of generating more than 10 megawatts. An application for a site compatibility certificate should include the submission of a site assessment report as prescribed in the applicable Siting Board statutes. Glover Creek states that it is not a utility under the jurisdiction of the Kentucky Public Service Commission. However, Glover Creek states that it has nonetheless met the requirements of KRS 278.216 by complying with the requirements of KRS 278.700 *et seq.*, including the submission of a site assessment report.

KRS 278.218 provides that no transfer of utility assets having an original book value of \$1 million or more without prior approval of the Kentucky Public Service Commission if the assets are to be transferred by reasons other than obsolescence or the assets will continue to be used to provide the same or similar service to the utility or

³⁵ Motion at 10.

its customers. Glover Creek states that it is not a utility as that term is defined in KRS 278.010(3). However, to the extent Siting Board approval may at some time be required for change of ownership or control of assets owned by Glover Creek, Glover Creek states that it will abide by the applicable rules and regulations which govern its operation.

KRS 278.700 *et seq.* governs the Siting Board's jurisdiction and process. Glover Creek states that it has met the goals set forth in these provisions as evidenced by the application in its entirety. Glover Creek further states that it 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.

Having reviewed the record and being otherwise sufficiently advised, the Siting Board finds that Glover Creek 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) at a distance closer than the required 2,000 feet and is therefore permitted to a deviation from the 2,000 feet setback requirement, with the exception of the location of the inverters. The Siting Board will require that the inverters be located at least 2,000 feet from the closest residence given that the application provided that the location of the inverters will be at least at such a distance.

History of Environmental Compliance

Glover Creek states that neither it nor any entity with ownership interest in the proposed solar project has violated any state or federal environmental laws or regulations. Glover Creek further states that there are no pending actions against Glover Creek nor any entity with ownership interest in the proposed solar project.

KRS 278.710(1)(i) directs the Siting Board to consider whether the applicant has a good environmental compliance history. In light of Glover Creek's verified statement and no evidence to the contrary, the Siting Board finds that Glover Creek has satisfied the requirements of KRS 278.710(1)(i).

Decommissioning

According to Glover Creek, the proposed solar facility would have an expected useful life of 40 years. The Noise and Traffic Assessment also states that at the end of the project's life, the equipment and electrical infrastructure will be removed from the site, and land may return to farming or other development.³⁶ According to Glover Creek, decommissioning activities would include the removal of all solar facility equipment, substation equipment and fencing, as well as land restoration and erosion control for about 450 acres.³⁷ Glover Creek states that land restoration would entail removal of gravel access roads and re-seeding of disturbed area. Erosion control would include installation of perimeter erosion control measures prior to the start of decommissioning and removal of those measures following decommissioning. Glover Creek also suggests an economic incentive to properly remove the solar equipment, citing estimates that the material value of items such as aluminum, copper and steel would be greater than the cost of removing the equipment and restoring the property.

Because it is of the belief that the economic incentive relied by Glover Creek is highly uncertain due to projected costs for decommissioning and future metal prices and

³⁶ Application Volume 2, Exhibit C.

³⁷ Glover Creek's Responses to Harvey Economics' Second Requests for Information (filed June 29, 2020), Item IX.

the land lease provisions also might not cover the entire site or be easily enforceable, Harvey Economics recommends the following decommissioning measures.

1. Glover Creek, 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 should be deferred if Glover Creek continues with its currently proposed operation beyond 40 years.

2. If Glover Creek, its successors or assigns, retrofit the current proposed facility to produce solar energy beyond 40 years, it must demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts as addressed in the Harvey Economics Report. Otherwise, a new SAR must be submitted for Siting Board review.

3. Glover Creek, 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 finds that the decommissioning measures recommended by Harvey Economics to be appropriate and reasonable. Accordingly, the Siting Board will require Glover Creek to implement the recommended decommissioning measures as conditions of its grant of a certificate in this matter.

CONCLUSION

After carefully considering the criteria outlined in KRS Chapter 278, the Siting Board finds that Glover Creek has presented sufficient evidence to support the issuance of a deviation from the setback requirements of KRS 278.704(2) and a Certificate to Construct the proposed merchant solar facility. The Siting Board conditions its approval

upon the 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. Glover Creek's Application for a Certificate to Construct an approximately 55 MWac merchant solar electric generating facility in Metcalfe County, Kentucky is conditionally granted subject to full compliance with the mitigation measures and condition prescribed in Appendix A.

2. Glover Creek's motion for deviation from the 2,000 feet setback requirement is granted except for the location of the inverters.

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

By the Kentucky State Board on Electric
Generation and Transmission Siting



ATTEST:

A blue ink signature, appearing to be "B. C.", written over a horizontal line.

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

Case No. 2020-00043

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO. 2020- 00043 DATED SEP 23 2020

MITIGATION MEASURES AND CONDITIONS IMPOSED

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

1. Glover Creek shall place “High Voltage Keep Out” or equivalent warning signs along the perimeter at approximately every 100–200 feet and at all gates or entrances.

2. Upon its completion, a final site layout plan shall be submitted to the Siting Board. Material deviations from the preliminary site layout plan which formed the basis for the instant review shall be clearly indicated on the revised graphic. Those material changes might include substantive changes in the location of solar panels, transformer, inverters, panel motors, substation, or other project facilities or infrastructure.

3. Any change in Glover Creek’s boundaries from the information that formed the basis of this evaluation shall be submitted to the Siting Board for review.

4. The Siting Board shall determine whether any deviation in the boundaries or site development plan is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if that is the case, Glover Creek shall support the Siting Board’s effort to revise its assessment of impacts and mitigation requirements.

5. Glover Creek or its contractor shall control access to the site during construction and operation. All construction entrances shall be gated and locked when not in use.

6. 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.

7. Where there are potential visual or noise impacts created by the solar facility, Glover Creek shall plant a 15-foot wide vegetative buffer consisting of two staggered rows of evergreen shrubs. The evergreen shrubs shall be either mature at the time of planting or at least six feet in height, or if Glover Creek elects to plant non-mature evergreen shrubs of at least 3 feet at the time of planting, Glover Creek shall also include additional temporary buffers that would immediately help to mitigate any potential noise and visual impacts until the evergreen shrubs have grown to maturity.

8. Glover Creek shall implement the modified vegetative buffers to those properties that are within 1,500 feet of the solar facilities' boundary lines before the tamping of the racking panels and Glover Creek shall schedule the tamping process at these nearby homes so that the tamping will occur at the end of the tamping process period.

9. Glover Creek shall cultivate at least two acres of native, pollinator-friendly species on-site.

10. Glover Creek shall develop a traffic management plan to minimize the impacts of any traffic increase and keep traffic safe. Part of this traffic management plan

will be to maintain all traffic and staging on-site. In addition, the traffic management plan shall also identify any noise concerns during the construction period and develop measures that would address those noise concerns.

11. Glover Creek's construction activity, process, and deliveries shall be limited to the hours of 8 a.m. and 6 p.m. Monday through Saturday.

12. Glover Creek shall use appropriate signage and traffic signaling as needed to aid construction traffic and prevent severe traffic issues.

13. As needed, Glover Creek shall provide a temporary traffic signal at the intersection of SR 90 and SR 640.

14. As needed, Glover Creek will shuttle commuting construction workers.

15. Glover Creek's contractor 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; revegetation measures and covering of spoil piles.

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

17. Glover Creek shall fix or pay for damage resulting from any vehicle transport to the project site.

18. Residents within 1,500 feet of the property boundaries of the Glover Creek solar facility shall be notified about potential construction noises. Residents within 500 feet of the solar panels shall be notified about potential operational noises.

19. Glover Creek shall 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. Any noise generator that creates noise levels in excess of 120 dB shall be considered unduly high or annoying.

20. If noise levels during the construction period are unacceptable to nearby residents or landowners (i.e., noise levels greater than 120 dB), Glover Creek shall take such steps to mitigate the noise impact.

21. Glover Creek shall contact nearby residents to confirm that noise levels are not unduly high or annoying after operations begin. Any noise generator that creates noise levels in excess of 120 dB shall be considered unduly high or annoying.

22. Glover Creek shall consider, among other things, additional buffering, fencing, or revising the construction schedules or delivery patterns in those areas where noise impacts are annoying residents or will potentially annoy them.

23. Glover Creek shall comply with all applicable conditions relating to electrical interconnection with utilities by following the PJM interconnection process. Glover Creek shall also accept responsibility for appropriate costs which may result from its interconnecting with the electricity transmission grid consistent with the obligations imposed by KRS 278.212.

24. Glover Creek, its successors or assigns, shall 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 shall be deferred if Glover Creek continues with its currently proposed operation beyond 40 years.

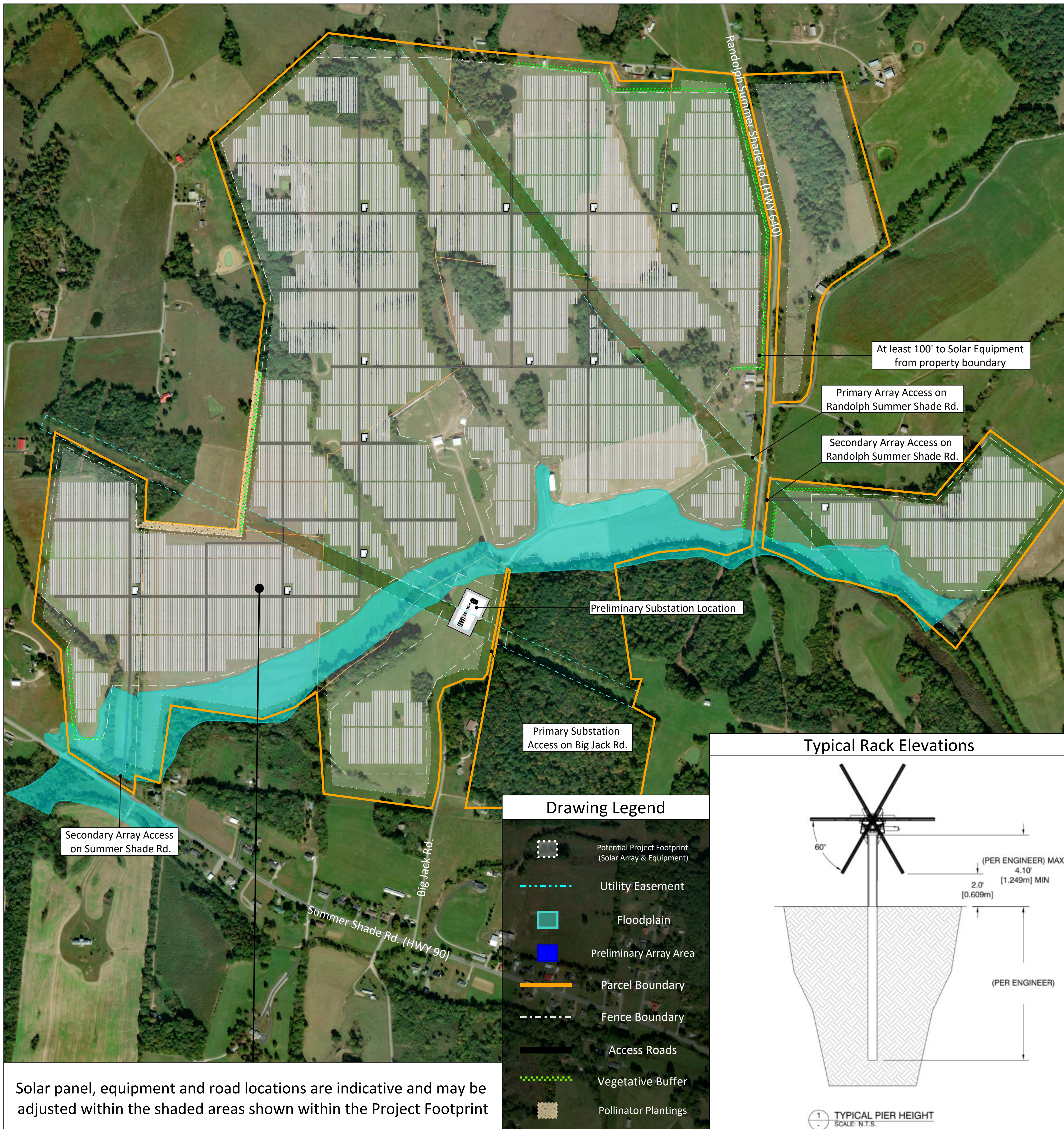
25. If Glover Creek, its successors or assigns, retrofit the current proposed facility to produce solar energy beyond 40 years, it shall demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts as addressed in the Harvey Economics Report. Otherwise, a new SAR must be submitted for Siting Board review.

26. Glover Creek, its successors or assigns, shall prepare a new SAR 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-
00043 DATED SEP 23 2020

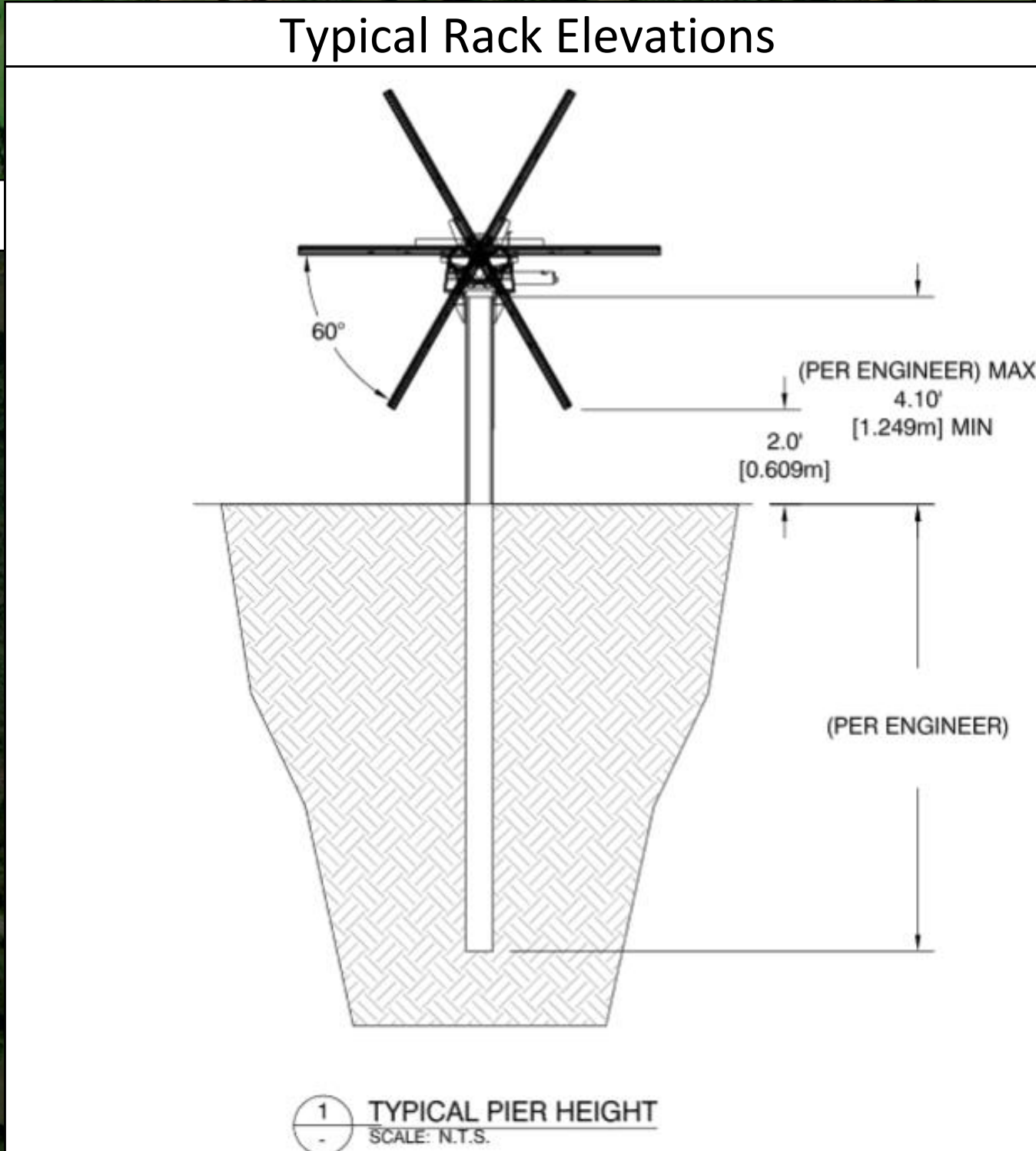
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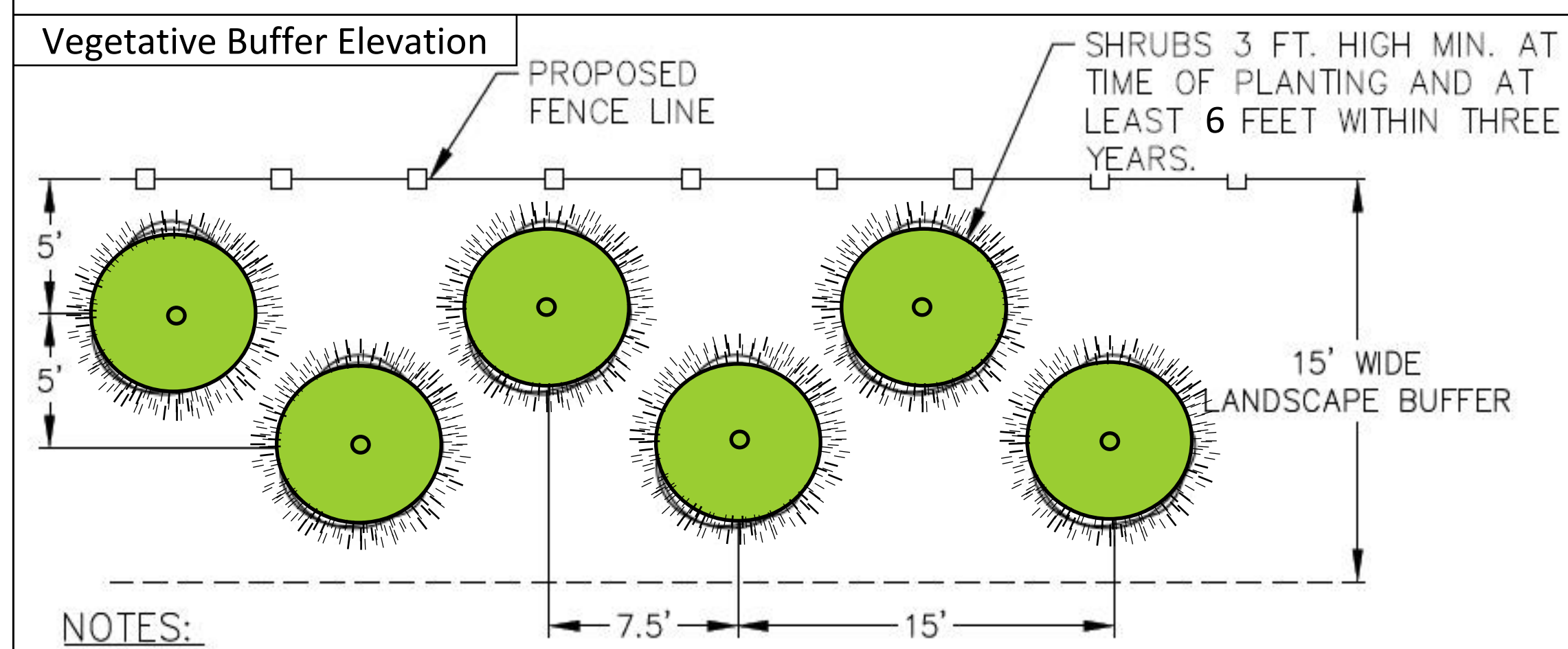
Solar panel, equipment and road locations are indicative and may be adjusted within the shaded areas shown within the Project Footprint

Drawing Legend

- Potential Project Footprint (Solar Array & Equipment)
- Utility Easement
- Floodplain
- Preliminary Array Area
- Parcel Boundary
- Fence Boundary
- Access Roads
- Vegetative Buffer
- Pollinator Plantings



- ### Standard Notes
- (1) The Purpose of this plan is for a Power Generation Permit for review and approval by the Kentucky State Siting Board to construct a solar energy system. All information shown is for planning purposes only.
 - (2) The property lines, existing improvements, and topographic data shown hereon are not based on a field survey and have been completed from ArcGIS & Google Earth Imagry. No field evidence of property markers were located with this Exhibit.
 - (3) Wetlands and Streams are shown representative of a delineation received by Carolina Solar Energy.
 - (4) Project area will be cleared and grubbed as necessary, retaining pre-development drainage patterns as much as possible. Minor grading will occur around inverter areas to divert surface drainage. Areas subject to rutting during construction will be temporarily stabilized with gravel that will remain after construction. Soil conditions and equipment loads will determine final design.
 - (5) Proposed construction and temporary laydown yard/construction staging area to be used during site construction. A portion of this area will be covered with gravel to allow delivery of construction materials. Prior to construction, this area will be compacted by a smooth drum or sheepsfoot roller to reduce/prevent rutting. Following construction gravel laydown yard will be removed.
 - (6) Access aisles shown on this plan indicate construction and maintenance access points for ingress/egress. Prior to construction, these aisles are compacted by a smooth drum or sheepsfoot roller to reduce/prevent rutting. Gravel may be placed in high traffic or poorly draining areas during construction activities to improve access. Soil access aisle will be scarified, aerated, and re-seeded after construction. Access aisles to inverters may require gravel to support delivery equipment loads. Soil conditions and final equipment selection will determine if gravel access aisles will be required to inverter locations
 - (7) All Right-Of-Ways are public unless noted otherwise.
 - (8) Utility lines and services shown hereon are approximate per aerial photography or as reported by various responsible parties. Location of underground utilities are not shown. Call appropriate authorities before digging.
 - (9) No lighting is proposed for the array area. The Interconnection Substation will have some lighting.
 - (10) 6' tall chain link fence with three strands of barbed wire or similar to meet National Electric Code requirements. The proposed access gate will be will be locked with a standard keyed or combination lock. Emergency personnel will be provided a key or combination for access.



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 400 W Main St
 Durham, NC 27701
 Suite 503

Glover Creek Farm
 55 MWAC

ISSUE
 06.17.20
 05.26.20
 12.02.19
 12.05.19

PROJECT
 Glover Creek

DRAWN BY
 CJ

DESCRIPTION
 Array Layout

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