COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of:

ELECTRONIC APPLICATION OF MCCRACKEN COUNTY SOLAR LLC FOR A CERTIFICATE OF CONSTRUCTION FOR AN APPROXIMATELY 60 MEGAWATT MERCHANT ELECTRIC SOLAR GENERATING FACILITY IN MCCRACKEN COUNTY, KENTUCKY PURSUANT TO KRS 278.700 AND 807 KAR 5:110	)	CASE NO. 2020-00392

O R D E R

On May 11, 2021, McCracken County Solar LLC (McCracken Solar or Applicant) filed an application with the Kentucky State Board on Electric Generation and Transmission Siting (Siting Board) seeking a Certificate of Public Convenience (CPCN) to construct an approximately 60-megawatt alternating current (MWac) photovoltaic electricity generation facility (Project). There are no intervenors in this matter. Pursuant to a procedural schedule entered on June 9, 2021, McCracken Solar responded to two rounds of discovery. Siting Board consultants, Wells Engineering, reviewed McCracken Solar's site assessment report (SAR). A site visit was held on July 12, 2021, and the Wells Engineering's report (Consultant's Report) was filed on August 16, 2021. McCracken Solar submitted its response to the Consultant's Report on August 30, 2021. A formal evidentiary hearing was held on September 9, 2021. McCracken Solar filed responses to post-hearing data requests on September 20, 2021. The Siting Board received written public comments, and the Siting Board heard no public comments at the

beginning of the September 9, 2021 formal evidentiary hearing. The matter now stands submitted for a decision.

PROPOSED MCCRACKEN COUNTY SOLAR FACILITY

The proposed solar facility is to be located in western McCracken County, Kentucky, located along New Liberty Church Road approximately 2.5 miles northeast of Kevil, Kentucky. The site is bordered on the south by Massey Road and on the east by Bethel Church/Rossington Road.[1] The proposed McCracken Solar Project will be located on approximately 615 acres of land.[2] Most of the proposed site is currently in agricultural use for the production of row crops.[3] The Project will include 156,000 photovoltaic solar panels, associated ground-mounted racking, 16 inverter stations, and a substation transformer that will connect to the 69 kV "McCracken County-Shell" transmission line owned by Big Rivers Electric Corporation (BREC).[4] The solar facility has a rated capacity of 60 MW. All the electricity produced by the Project will be gathered at a project substation, prior to delivery to the local transmission system. The Project will interconnect to a 69 kV transmission line on site, which is owned and operated by BREC. The Applicant has signed a long-term contract to sell 100 percent of the electricity generated by the Project to BREC.[5]

McCracken Solar notes that there are multiple residential neighborhoods, as defined by KRS 278.700, within two miles of the Project's facilities. McCracken Solar

[1] Application, Volume I, Exhibit 2 at unnumbered page 10.

[2] Application, Volume I, Exhibit 12 at unnumbered page 183.

[3] *Id*.

[4] Application, Volume I at unnumbered page 2.

[5] Application, Volume I, Exhibit 12 at unnumbered page 183.

provided required notice to the 30 landowners whose property borders the proposed solar facility site.[6]

In addition, as required by KRS 278.706(2)(f), McCracken Solar engaged in public involvement program activities prior to the filing of its application.[7]

On December 30, 2020, McCracken Solar launched a Project Website, accessible to the public, containing information about to the McCracken Solar's parent company Community Energy and the McCracken Solar Project.[8]

On December 30, 2020, McCracken Solar also published notice on the solar project website, and sent letters to thirty adjacent landowners, providing information about specific hours for in-person discussion opportunities in McCracken County. On January 13, 2021, during the In-Person Office Hours, Chris Killenberg, Regional

[6] *Id*. See also KRS 278.706(2)(c). See also Application, Volume 1, Exhibit 3 at unnumbered page 15 at which McCracken Solar states that it provided notice via United States mail on April 13, 2021, and also published notice of the proposed solar facility in the *Paducah Sun* newspaper, the daily newspaper of general circulation, printed and published in Paducah, McCracken County, Kentucky, on April 16, 2021 and April 17, 2021.

[7] Application, Volume I, Exhibit 6 at unnumbered page 45. On September 15, 2020, Chris Killenberg, representing McCracken Solar, met in person with McCracken County officials to introduce the proposed project. Those officials were Judge Executive, Craig Clymer; Deputy Judge Executive, Steve Doolittle; Community Development, Steve Ervin; and Planning & Zoning, Greg Cannon. On October 20, 2020, Chris Killenberg again met in person with the four county officials listed above to lead them on a tour of three operating large-scale solar farms in Selmer, TN.

[8] Application, Volume I, Exhibit 6 at unnumbered page 39. The website contained an introduction of Community Energy and a link to obtaining more information about the company; a PowerPoint presentation providing general information on the McCracken Solar Project; the date, time, and location of in-person office hours for questions about the solar project; the date, time, and other details of a subsequent virtual public information meeting; a map showing the solar project area, facility layout, aerial imagery, and parcel information for all participating properties in McCracken County; information pertaining to state and county permitting processes; contact information and instructions for submitting questions and comments regarding the solar project; a summary of frequently asked questions and responses; and instructions on how to request more information, including paper copies of the PowerPoint presentation.

Development Director for Community Energy (parent of McCracken Solar Solar), met with Patrick Bouldry, owner and resident of land adjacent to the Project.[9]

On Wednesday January 20, 2021, the Applicant conducted a Public Information Meeting featuring a presentation of the Project from McCracken Solar representatives, and providing an opportunity for the public to ask any questions related to the solar project.[10] Private meetings and conversations were also held with both adjacent and nearby landowners from as early as July 2019 to January 2021.[11] Lastly, on January 27, 2021, Chris Killenberg addressed the McCracken County Planning Commission in support of the proposed solar ordinance.[12]

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

[9] Application, Volume I, Exhibit 6 at unnumbered page 40. Mr. Bouldry considered leasing a portion of his property for the Project, but decided against it. Mr. Bouldry had general questions about the Project and inquired whether there would be an opportunity to provide landscaping services to the Project. Chris Killenberg answered his questions and promised Mr. Bouldry he would be made aware of any related bid opportunities.

[10] Application, Volume I, Exhibit 6 at unnumbered pages 41–45. McCracken Solar published notice, December 30, 2020, in the *Paducah Sun*, providing information about a live presentation on January 20, 2021 from 7:00pm – 8:30pm Central Time (CT) regarding the solar project with a question-and-answer session, accessible to the public either by the internet or by telephone. On December 30, 2020, McCracken Solar also mailed to 30 adjacent landowners a package, which included a site map, details about the project, the project website address, and details about opportunities to participate in the in-person office hours and virtual public information meeting. This same package was sent to McCracken County public officials. The individuals at the public meeting representing McCracken Solar were Chris Killenberg, Regional Development Director, Community Energy, Rich C Kirkland, Jr., MAI, Kirkland Appraisals, LLC, and Marty Marchaterre, Senior Environmental Planner, Copperhead Environmental Consulting, Inc.

[11] Application, Volume I, Exhibit 6 at unnumbered pages 41–45.

[12] Application, Volume I, Exhibit 6 at unnumbered page 46.

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 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 SAR.

Detailed Site Description

The SAR was prepared and developed by the Applicant. A Site Plan for the proposed facility was provided in the Application as Exhibit 5 Attachment, with maps dated May 3, 2021. These are the same as those submitted with the SAR as Exhibit 12, Attachment 12.6. The "McCracken County Solar Updated 2-mile Radius Map" shows that the closest church is approximately 4,400 feet from the proposed facility and that the West Kentucky Wildlife Management Area (WMA) is adjacent. There are no hospitals, nursing homes, schools, or private parks within the two-mile radius.[13] There are a number of

[13] McCracken Solar's Responses to Siting Board Staff's First Request for Information (filed July 9, 2021) at 25; and Application, Volume I, Exhibit 2 at unnumbered page 11; and Application, Volume I, Exhibit 2, Attachment 2 at 1.

residential neighborhoods, which are described and listed in Exhibit 2 of the Application, within the two-mile radius of the Project site.[14]

Adjoining land is a mix of residential and agricultural uses and a large industrial site, the Paducah Gaseous Diffusion Plant, owned by the United States Department of Energy. In 2013, operations ceased to produce enriched uranium for use in nuclear power plants, although deactivation of the plant and extensive cleanup activities continue.[15] The plant's footprint is buffered by the West Kentucky WMA that abuts to the project site.[16] The West Kentucky WMA allows hunting, picnicking, hiking, fishing, horseback riding, skeet shooting, and archery.[17] According to the Property Value Impact Study prepared by Richard C. Kirkland, the adjoining parcels are 36 percent residential, 24 percent agricultural, and 36 percent agricultural/residential.[18] All 34 properties that are adjacent to the proposed McCracken Solar facility project site are owned by non-participating landowners.[19] To the northwest of the site and across New Liberty Church Road are a number of residences. To the south and to the southwest of the site, along Massey Road, are three residences.[20]

The legal descriptions of the land to be utilized as the Main Project Site, the Substation Site, and Utility Easement are provided as Exhibit 12, Attachment 12.3. The

[14] *Id.* at 25.

[15] Application, Volume I, Exhibit 12 at unnumbered page 313.

[16] Application, Volume 1, Exhibit 2 at unnumbered page 11

[17] Application, Volume I, Exhibit 12 Attachment 12.5 at unnumbered page 225.

[18] Application, Volume I, Exhibit 12 Attachment 12.6 at unnumbered page 314.

[19] McCracken Solar's Responses to Siting Board Staff's Post-Hearing Request for Information (filed Sept. 20, 2021) at unnumbered page 4.

[20] Application, Volume I, Exhibit 12 at unnumbered page 183.

main body of the site, approximately 615 acres, is constituted of three parcels of which the applicant has secured long-term leases. The term of each lease includes a 2-year Development Feasibility Term followed by a 35-year Commercial Term.[21] One of these properties recently changed hands, and an amendment to the lease is in process.[22] The point of interconnection (POI) of the Project to BREC's 69 kV transmission line will be located on a separate parcel, adjacent to the main body of the site.[23] The applicant has secured an access and utility easement for a portion of this parcel for the construction and operating period of the Project, and the easement terminates upon the cessation of the Project's operations.[24]

The entire facility will be surrounded by a security fence. Access to the proposed facility will be from three points along the eastern side of New Liberty Church Road, with an additional access point along Massey Road.[25] Per the McCracken County Zoning Code, a security fence shall surround all Level 2 Solar Energy Systems and be at least 7 feet tall or 6 feet tall with 3 strands of barbed wire.[26] At the time of construction and operation of the plant, all necessary signage, caution boards and safety requirements per Kentucky Transportation Cabinet and Kentucky Occupational Safety and Health

[21] *Id*. at unnumbered page 184.

[22] Consultant's Report at 23. *See also* McCracken Solar's Response to the Consultant's Report (filed Aug. 30, 2021) at unnumbered page 2.

[23] Application, Volume I, Exhibit 12 at unnumbered page 185

[24] *Id*.

[25] Application, Volume I, Exhibit 2 at unnumbered page 10.

[26] Application, Volume I, Exhibit 5 at unnumbered page 31; and Application, Volume I , Exhibit 12 at unnumbered page 213.

requirements shall be installed.[27] No part of the site will be accessible to the public. All solar equipment will be grounded and touch-safe, fully compliant with all applicable codes and accessible only to qualified personnel, with the exception of guided tours. Prior to commencing operations, orientation will be provided to local first responders to educate them about the project, the equipment, access, and procedures in case of unexpected events. Contact information for the Project's monitoring and response center will be posted on the fence to ensure the public can easily reach project representatives.[28]

There will be no facility buildings; however, a storage container may be placed on site for tools and spare parts. A new 34.5 kV circuit will be constructed, mounted overhead on traditional wooden power poles, and located within the utility easement referenced above. This circuit will connect to the project substation, which will connect to the adjacent 69 kV BREC transmission line. Within the project substation, typical wooden and steel structures will be required for the mounting of overhead power lines entering and leaving the project substation.[29]

A network of permeable compacted gravel roads will be constructed internal to the site. Internal roads are needed to access major electrical equipment such as inverters and transformers. All internal roads that conclude in a "dead end" will include a turnaround sufficient in radius to accommodate delivery trucks, fire trucks, and other work or emergency vehicles. No railways are located on the Project site and no local railways

[27] Consultant's Report at 33.

[28] Application, Volume I, Exhibit 6 at unnumbered pages 56–57.

[29] Application, Volume I, Exhibit 12 at unnumbered page 185.

will be used.[30] The Site Plan shows access points from public roads. Note that access along New Liberty Church Road for construction will be limited to 8 tons.[31]

A minor amount of electricity will be required during operation for starting equipment, providing communications and security, and for general back-up. Jackson Purchase Energy Cooperative (JPEC) will provide that service utilizing a 3-phase circuit that runs along New Liberty Church Road for the entire length of the western boundary of the site. All the electricity produced by the Project will be gathered at a project substation, and interconnect to a 69 kV transmission line, owned and operated by BREC. The applicant has signed a long-term contract to sell 100 percent of the electricity generated by the Project to BREC. Use of water and wastewater utility service is not anticipated.[32]

Wells Engineering evaluated the data contained in the SAR and concluded that all of the sections of the report comply with the intent of KRS 278.708.[33] However, Wells Engineering found that there are two areas where additional conditions or mitigation measures are needed. The report recommends the following mitigation measures:

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

2. Create an overall plot plan indicating all water bodies, bridges, culverts, access roads, power lines, residential and public structures, etc.

3. Update the property ownership records.

[30] Application, Volume I, Exhibit 12 at unnumbered page 186.

[31] Consultant's Report at 33.

[32] Application, Volume I, Exhibit 12 at unnumbered page 183.

[33] Consultant's Report at 23.

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

5. For locating the Solar Modules and Other associated equipment of the plant, maintain sufficient clearance from the existing power lines.[34]

Having reviewed the information and data contained in the SAR the Siting Board finds that McCracken Solar has complied with the requirements for describing the facility and a site development plan, as required by KRS 278.708. However, the Siting Board finds it necessary to impose certain mitigation measures and requirements related to the description of the facility and the proposed site development plan. Specifically, the Siting Board will require that McCracken Solar keep the Siting Board apprised of changes throughout the development of the Project, and as such will order McCracken Solar to provide the final site plan before the commencement of construction. This plan shall clearly indicate and highlight any changes, including those to the design and boundaries of the Project, from the proposed site plan provided to the Siting Board during the pendency of this matter. Additionally, based on the concerns and proposals of Wells Engineering, the Siting Board further finds that the mitigation measures outlined in Appendix A to this Order, and in particular, items 1–8 shall be adhered to.

Compatibility with Scenic Surroundings

McCracken Solar states the Project will be situated on approximately 615 acres of land that has historically been used for agricultural use for the production of row crops.[35] The land surrounding the Project has been used for agricultural, residential, and

[34] *Id. at 37.*

[35] Application, Volume I, Exhibit 12 at unnumbered page 183.

recreational purposes.[36] The majority of the land surrounding the proposed Project site is currently in agricultural production. This includes the cultivation of corn, soybeans, and wheat.[37] There are three areas of residential development adjacent to the Project. To the northwest of the site and across New Liberty Church Road are a number of residences; to the southwest of the site, along Massey Road, is a single residence; to the south of the site, also along Massey Road, there are two additional residences, and to the southeast of the proposed Project site is a recreational area known as the West Kentucky WMA.[38] This land is across Bethel Church Road/Rossington Road from the proposed Project site.

Solar facilities like the Applicant's proposed facility are low profile, generally 10 feet tall or less, and installed without foundations or brick-and-mortar structures. As such, McCracken Solar states that they are more similar to greenhouses or center-pivot irrigation systems than commercial or industrial development.[39] This specific site is a group of adjacent farm fields, surrounded on three sides by established tree lines and hedgerows. McCracken Solar advises the Project will adhere to the McCracken County Solar Ordinance, which requires that all perimeter tree lines shall be left in place to serve as a visual buffer; also per the Solar Ordinance, a double row of staggered evergreens will be planted on 15-foot centers where tree lines do not exist.[40] These evergreens will

[36] *Id*.

[37] *Id*.

[38] *Id.* at 183–184.

[39] *Id.* at 189.

[40] *Id*.

be a minimum of 8 feet tall at planting, and mature to a minimum of 15 feet tall.[41] In addition to maintaining or installing vegetative buffers, the proposed Site Plan would position the solar panels a minimum of 500 feet away from any adjacent residence.[42] McCracken Solar contends that the combination of a low-profile construction, retention of extensive existing natural buffers, installation of substantial evergreen buffers where needed, and significantly enhanced setbacks will result in a facility that is visually compatible with its surroundings.[43]

Wells Engineering concurred with the opinion of McCracken Solar in the findings of the Consultant's Report. Wells Engineering stated in the Consultant's Report that based on the data and analysis, they are of the opinion that the proposed solar facility will have no negative impact on adjoining or abutting property, and that the proposed use is in harmony with the area in which it is located.[44]

The Consultant's Report recommends the following mitigation measures:

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

Having reviewed the records of the proceeding, including McCracken Solar's responses to the Consultant's Report, the Siting Board concurs with Wells Engineering's position and that the passive characteristics of the proposed solar facility combined with

[41] *Id*.

[42] *Id*.

[43] *Id*.

[44] Consultant's Report at 27.

current vegetation and the proposed vegetative buffers, along with other mitigation measures proposed by McCracken Solar will minimize the effects the proposed facility will have on the scenic surroundings of the site. However to ensure the continued compatibility of scenic surrounding, mitigation measures addressing obligations to maintain or further develop vegetative buffers and keep the Siting Board informed of potentially material changes to the site plan are necessary. As such, and based on the record, additional mitigation measures regarding scenic compatibility are outlined in Appendix A to this Order, and in particular, items 9 through 14.

Impact on Property Values

With respect to impact on property values, McCracken Solar 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.[45] 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 Consultant's Report evaluated the impacts to property values by preparing further analysis of the information provided in McCracken Solar's Property Value Impact Report using Mary McClinton Clay, MAI. The review conducted by Mary McClinton Clay noted that the methodology for the appraisal findings were missing from the report and

[45] See Application, Volume 1, Exhibit 12, Attachment 12.6 at unnumbered page 311.

the case studies reviewed were ones funded by solar developers.[46] The Consultant's Report also indicates viewshed as the primary area of concern, but indicates that every site is different and every property within that site is different and to draw a consistent conclusion is difficult. The review also examined the North Star case study that showed the number of effected property owners who received compensation through a neighborhood agreement, or had their property directly purchased by the developer in an attempt to remove or reduce negative responses from property owners. These developers then flipped the property a few years later at a loss and in one instance sold the property back to the original owner. The review concludes that that many more data points are needed in appraising the actual valuation effect of the Solar Power Plant on property values. The Consultant's Report states that with the use of proper mitigation measures including vegetation buffers, any impact on property values can be minimalized.

Overall, the Consultant's Report concludes that while there will always be impact to the scenery of neighboring properties, the impact of this project is minimal. The combination of the topography, existing tree line, existing human made features, and the large setback from the property line proposed by the developer works well to minimize the impact. The major exceptions to this are the project participants and a few other directly neighboring landowners.[47]

Having reviewed the record, the Siting Board finds that there is sufficient evidence to conclude that the proposed McCracken Solar facility will more than likely not have any

[46] Consultant's Report at 53–54.

[47] Consultant's Report at 25.

adverse impact on nearby property values. As noted earlier, the characteristics of the solar facilities operations are passive in nature in that they do not produce any air, noise, waste, or water pollution nor do the solar facilities create any traffic issues during operations.

Impact on Roads, Railways, and Fugitive Dust

With respect to the impact on roads, railways, and fugitive dust, McCracken Solar's SAR contains a Traffic Study that provides the existing roads that are adjacent to the site and the existing roads that would be used to access the McCracken Solar Site.[48] The major roads to be used to access the facility from the north and south are anticipated to be I-24, I-57, and US 60.[49] Although numerous local county and state maintained roads exist near the site area, this study analysis assumed US 60 would generate the majority of worker and material delivery traffic entering and leaving the site. Assumptions for this resulted in 90%of the traffic coming from US 60 East and 10 percent coming from US 60 West.[50]

McCracken Solar advises that the construction of the proposed solar facility is expected to take approximately six to nine months.[51] During construction, a temporary increase in traffic volume associated with travel of construction laborers (150 total at any given time), delivery of construction equipment and material, and delivery of solar panel components is anticipated. Laborer commutes with passenger vehicles and trucks will

[48] Application Volume I, Exhibit 12, Attachment 12.7 at unnumbered page 435.

[49] *Id*.

[50] *Id.* at unnumbered page 436.

[51] *Id.* at 444.

occur daily with two traffic peaks (i.e., morning peak and afternoon peak), whereas, deliveries of equipment will occur on trailers, flatbeds, or other large vehicles periodically throughout the construction process at various times of day.[52]

McCracken Solar advises that to reduce traffic congestion at intersections and along the local roads, authorized solar farm representatives may issue "route cards" indicating the time and route individual workers and deliveries must follow to enter and leave the site.[53] Further McCracken Solar states ride sharing for employees working during the construction phase will be encouraged in order to reduce the daily traffic count to and from the Project site during the morning and afternoon peaks.[54] Permanent road or lane closures are not anticipated for the construction of the solar facility. Construction of the facility is not expected to impact roads, but safety precautions including signage, signaling, flagmen, and temporary lane closures may be utilized as needed.[55]

Per the traffic study provided with the McCracken Solar SAR, construction of the facility is not expected to have any significant impact on the existing road infrastructure other than increased wear due to increased traffic on KY 473, KY 725, and Massey Road. The existing bridge on KY 725, between the site's westerly access locations, has a posted eleven-ton weight limit.[56] All crossing equipment and transported materials needed during construction will not be allowed to exceed the posted limit. In an unqualified manner, McCracken Solar states that any impact to the roads or bridge due to

[52] *Id*.

[53] *Id*.

[54] *Id*..

[55] *Id*. at 449.

[56] *Id*.

construction of the facility will be repaired at the expense of the Applicant.[57] Access drives and internal roads will be constructed or improved 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.[58]

McCracken Solar concedes that fugitive dust is anticipated during construction from land disturbance and use of unpaved driveways, but due to the low-density housing and rural character near the site, and the large size of the site, minor fugitive dust impacts are expected.[59] Per the traffic study submitted with the McCracken Solar SAR to reduce potential dust impacts, open-bodied trucks will be covered while in motion and water may be applied to internally constructed compacted gravel roads and the site in general to reduce dust generation dust from.[60] Under the KY Pollutant Discharge Elimination System, water used for dust control during the facility construction is authorized as a non-storm water discharge activity. The McCracken Solar facility will apply best management practices (BMP) for dust mitigation.[61]

The Project is not located near an existing railway. The Project will not use railways for any construction or operational activities.[62]

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[57] *Id*.

[58] *Id*.

[59] *Id.*

[60] *Id*.

[61] *Id*.

[62] *Id*.

Wells Engineering found that due to the low traffic volumes of existing roadways near the proposed McCracken Solar facility (fewer than 1,500 vehicles per day), construction is not anticipated to cause level of service degradations, generating fewer than 200 additional vehicles per 14-hour working day (7 AM to 9 PM) during the eight to 12-month construction period.[63] However, Wells Engineering found during construction there will be considerable traffic of construction vehicles transporting the equipment of the plant and that necessary mitigation measures must be taken to avoid traffic congestion.[64] Once completed, the facility will have occasional employees on site (two or fewer daily vehicles), so long-term traffic impacts will be negligible.[65] Lastly, Wells Engineering found that dust impacts are anticipated to be minor, as dust impacts will be minimized through McCracken Solar applying best practices for dust mitigation.[66] The Consultant's Report recommends the following mitigation measures during the construction phase of the Project:

1. A detailed plan to keep the area safe from a traffic perspective both during construction should be submitted to the Kentucky Public Service Commission before construction commences.

2. Coarse (bigger) particles, called PM10, can irritate your eyes, nose, and throat. Dust from roads, farms, dry riverbeds, construction sites, and mines are types of

[63] Consultant's Report at 18.

[64] *Id*. at 6.

[65] *Id*. at 18.

[66] *Id*.

PM10. The applicant will submit in writing the specific plan to control fugitive dust and PM 10 during the construction process ten days prior to commencing construction.

3. Ten days prior to the commencement of construction, the Applicant will provide a detailed plan on how they will protect water resources in the Project area. The site assessment documents in several locations say that certain mitigation measures regarding erosion and protection of water resources "may" be carried out. This needs to be clearly specified.[67]

Having reviewed the records of the proceedings, the Siting Board finds that traffic impacts will require mitigation during construction of the solar facility and will be minimal during its operation. Mitigation measures required for the Project, including those related to McCracken Solar's obligations regarding traffic and road degradation, as well as related permits, are necessary based on the concerns and evidence provided by the SAR and the Consultant's Report. As such, Mitigation measures related to traffic and roads are outlined in Appendix A of this Order, and in particular, items 15 through 22.

The Siting Board also believes that fugitive dust should not be an issue given the Applicant's proposed best practices for construction and operational activities. To ensure fugitive dust meets the expectation of not being an issue during the construction phase or operational phase of the Project, the Siting Board will require McCracken Solar to implement Mitigation Measure 23 outlined in Appendix A of this Order.

[67] *Id.* at 27.

Anticipated Noise Level

McCracken Solar's SAR indicates that the surrounding the Project can be defined as agricultural, residential and recreational.[68] McCracken Solar notes that located to the southeast of the proposed project site is a recreational area known as the West Kentucky (WMA).[69]

According to McCracken Solar's Acoustical Analysis Study, the nearest non-participating residence is approximately 515 feet from the nearest solar panel and 1,175 feet from the nearest inverter.[70] The transformer will be located approximately 600 feet to the nearest noise receptor.[71] The WMA boundary will be approximately 185 feet from the nearest solar panel and 1,034 feet from the nearest inverter.[72]

McCracken Solar notes that one mile east of the proposed Project site is the Paducah Gaseous Diffusion Plant and approximately 3.5 miles northeast of the proposed Project site is the Tennessee Valley Authority Shawnee Fossil Fuel Plant. Sounds from these facilities will contribute to the ambient sound level of the area.[73]

McCracken Solar provides that construction of the facility is expected to commence in September of 2022 and be completed in June of 2023.[74] The loudest

[68] Application Volume I, Exhibit 12 at unnumbered page 182.

[69] *Id.* at unnumbered page 184.

[70] Application, Volume 1, Exhibit 12, Attachment 12.5, Acoustical Analysis at unnumbered page 21.

[71] *Id.*

[72] *Id*. at unnumbered page 225.

[73] Application, Volume 1, Exhibit 12, Attachment 12.5, Acoustical Analysis at unnumbered page 227.

[74] McCracken Solar's Response to Siting Boards First Request for Information, Appendix A Response 5 at 32–33.

source from construction is anticipated to be pile-driving equipment used to install solar panel support posts. The anticipated noise produced by pile driving equipment will be approximately 63.74 dBA at the nearest residence located 515 feet from the closest solar panel.[75] A ditch trencher will be used for laying electrical cables in a trench 3 to 4 feet deep and 2 feet wide. The anticipated noise produced by the trenching equipment will be approximately 53.76 dBA at the nearest residence located 515 feet away. McCracken Solar asserts that construction work is expected to progress across the site such that equipment and activities would only be in a single area for a short period and that the sound level is temporary and will decrease as equipment moves further away.[76] McCracken Solar proposes to mitigate the effect of construction noise on nearby residence by designating portions of the Project site as Neighbor Zones. The noisier construction activities, such as pile driving, will be limited to 9 am to 5 pm, Monday through Friday in these Neighbor Zones.[77] Neighbor Zones will be comprised of the area of the Project site within 800 feet of an adjacent road right-of-way.[78]

When the solar facility is operating, there will be noise associated with the solar equipment, intermittent noise from single-axis tracking motors, a nearly constant noise from inverters, and the transformer. The tracking motors are anticipated to produce sound levels of 23.7 dBA at the closest residential receptor and approximately 33dBA at

[75] Application, Volume 1, Exhibit 12, Attachment 12.5, Acoustical Analysis at unnumbered page 229.

[76] *Id.*

[77] Application Volume 1, Exhibit 12 at unnumbered page 194.

[78] McCracken Solar's Response to the Siting Board's First Request for Information, Response 1(a) at 6.

the WMA boundary.[79] Sound from inverters is described as a hum and roughly the same output as a household air-conditioning unit. The sound level produced by inverters is predicted to be less than 38 dBA at any residence or at the WMA boundary.[80] Sound from transformers is described as a low frequency hum, with the sound level predicted to be 4.75 dBA at the closest receptor, 600 feet away.[81] According to McCracken Solar, site operations and maintenance sound levels from activities such as mowing will produce levels comparable to those of agricultural operations in the area.[82]

The Consultant's Report notes that noise issues stem from construction activities and operational components of the solar facility. During construction, noise will include pile drivers, chainsaws, bulldozers, dump trucks and other equipment.[83] The Consultant's Report concludes that the application submitted is substantially in compliance with the intent of the Kentucky Revised Statutes.[84] 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 Consultant's Report concluded the proposed use of the subject property is in harmony with the area in which it is located.[85] The anticipated noise from traffic, construction and operation of the facility will have minimal impact.[86]

[79] Application, Volume 1, Exhibit 12, Attachment 12.5, Acoustical Analysis at unnumbered page 230.

[80] *Id.* at 231.

[81] *Id.*

[82] *Id.* at unnumbered page 233.

[83] Consultant's Report at 13-14.

[84] *Id*. at 25.

[85] *Id*. at 11.

[86] *Id*. at 18.

The Consultant's Report recommends the following mitigation measure to address any potential noise impacts:

1. The Applicant shall prove notices to neighbors regarding potential construction and operation noises, as well as put limits on working hours during the construction period, as described in the Application.

The Siting Board finds noise from construction will be loudest during the pile driving portion of the construction process but that construction noise will be intermittent and temporary, and thus will not be permanently impactful to nearby residence, and the operational noise from the Project components should have little effect on nearby residents. Nevertheless, the impact of construction noise on nearby residents will be significant, albeit transitory. To ensure the impact of construction noise does not unduly impact nearby residents, the Siting Board will require McCracken Solar to implement mitigation measures designed to limit the impact of construction noise by controlling the hours of construction in general and, as well as, the time and manner in which pile driving activities can occur. Further, the Siting Board will mandate that noise suppression measures be utilized by McCracken Solar during the pile driving process, similar to those required by other recent applicants for construction certificates. These mitigation measures are outlined in Appendix A to this Order, and in particular, items 24–28.

Mitigation Measures Proposed by McCracken Solar

McCracken Solar's SAR contained the following mitigation measures that it plans to implement.[87]

[87] Application, Volume 1, Exhibit 12 at unnumbered pages 193–194.

1. To mitigate the possibility of end-of-day traffic congestion, the Applicant proposes the assignment of “Route Cards” to each construction employee. These Route Cards will assign a route of egress to each employee. This will allow for the more even distribution of vehicles across the multiple routes of egress, with a focus on directing vehicles to intersections where traffic lights will enable efficient and safe left-hand turns onto local roadways. Employee ride sharing will also be encouraged in order to reduce the number of vehicles entering and exiting the Project site during a typical construction day.

2. To mitigate the effects of construction noise on the area of the Project, the Applicant proposes to limit construction to the hours of 7am CT to 7pm CT, Monday through Saturday. No construction will be conducted on Sundays.

3. To mitigate the effect of construction noise on residences closest to the Project site, the Applicant proposes to designate certain portions of the site as “Neighbor Zones.” Within these Neighbor Zones, construction activities that create a higher level of noise will be limited to the hours of 9 a.m. CT to 5 p.m. CT, Monday through Friday. This will be particularly helpful to mitigate the impact of the noise associated with driving the posts to which the system is mounted. The restriction of this noisier construction activity within the Neighbor Zones to 9 a.m. to 5 p.m., Monday through Friday, should help mitigate the effect of this noise, as adjacent residents are more likely to be out of the home during these hours - at work, running errands, etc. The Applicant will communicate the Neighbor Zone plan to affected neighbors in advance of construction and will collaborate with those neighbors on any refinements to this approach.

4. To mitigate the sound levels associated with the proposed facility's operation, the Applicant plans to strategically position the Project's inverters at central locations within the system layout. The purpose of the inverters is to convert DC power (produced by the solar panels) to AC power (the form in which the electricity will be delivered to BREC). These inverters require a cooling fan. The cooling fan produces a sound level that is similar to a residential window air-conditioner unit. This sound dissipates over distance. To provide for sufficient dissipation of this sound before it reaches adjacent residences, the Applicant plans to locate the inverter stations at a minimum of 1000 feet from the nearest residence. This will assure that, once operational, the proposed facility will be quiet, with facility-generated noise levels at the periphery of the Project site at or below ambient levels.

5. To mitigate the visual impact of the proposed facility, the Applicant plans to enhance the setback distance between the solar panels and adjacent residences. The proposed setback will be a minimum of 500 feet between any solar panel and any adjacent residences.

II. Requirements under KRS 278.710(1)

In addition to the evaluation of the factors contained in the Consultant's 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

The Economic Impact Report (EI Report) was prepared using IMPLAN by the Center for Business and Economic Research at the University of Kentucky. According to the EI Report, the McCracken Solar Project is expected to have significant impacts on the economies of McCracken Solar and Kentucky as a whole, bringing new employment, spending, and taxes to the areas. There will be two phases of the project, (1) the construction phase, and (2) the operation phase, and an economic impact analysis was performed separately for each phase. The construction phase is estimated to last approximately 6 to 9 months, with the majority of economic impact occurring in the construction sector.[88] Other sectors are expected to be affected as contractors purchase supplies and materials from businesses in the area and workers spend a portion of their incomes at local businesses.[89] The operation phase is estimated to last 30 years or more.[90] The operation phase stands to bring less, but long-term, economic impacts to a variety of businesses in the area.[91]

The EI Report analyzes the direct, indirect, and induced impacts to Kentucky and McCracken County. Direct impacts refer to any employment and wages associated specifically with the Project.[92] Indirect impacts refer to employment and wages that occur outside the Project, but support the completion and operation of the solar site, such as

[88] Application, Volume 1, Exhibit 10, Attachment 10.1 at unnumbered page 145.

[89] *Id.*

[90] *Id.*

[91] *Id.*

[92] *Id.*

materials and supplies purchased from local businesses.[93] Induced impacts refer to employment and wages, unrelated to the Project, that result from the increase in business and household spending, stemming from the direct and indirect impacts.[94] Lastly, total impact refers to the combination of the direct, indirect, and induced impacts. Tax revenues generated from a 4.2 percent Kentucky income tax, a 6 percent Kentucky sales tax, a 1 percent McCracken County occupational license tax, and various property taxes will contribute to the overall economic impact of the Project.

During the Project's construction phase, McCracken Solar estimates a direct impact of up to 150 full-time equivalent workers (FTE) over the 6 to 9 month construction period with a direct payroll of $6.8 million.[95] McCracken Solar stated that approximately 80 percent of this workforce will come directly from the county.[96] The total impact to the county is estimated to be 193 total FTE jobs with a new payroll of around $9.1 million.[97] A full analysis for the state of Kentucky estimated that 15 additional full-time jobs would be created for an estimated total impact of 208 jobs and a payroll of 9.7 million.[98] Consequently, the project is expected to generate $701 thousand in income and sales taxes accruing to the State of Kentucky and $91 thousand in occupational license taxes to McCracken County.[99]

[93] *Id.* at unnumbered page 146.

[94] *Id.*

[95] *Id.* at unnumbered pages 146–147.

[96] *Id.* at unnumbered page 146.

[97] *Id.* at unnumbered page 147.

[98] *Id*.

[99] *Id.*

For the operation phase of the Project, McCracken Solar stated that 2 to 3 full-time workers would be necessary to support continued operation of the site over the 30-year Project life.[100] The operation phase will have an additional combined indirect and induced impact of 3.5 to 5.0 jobs throughout the county and state.[101] Accounting for the displaced economic impact of agricultural production on the land, the operation phase is estimated to have a net, present value, total impact of $6.9 million to $10.7 million in payroll.[102] Over 30 years, this results in an estimated $500,000 to $792,000 thousand in tax revenues to the state of Kentucky, and $62,000 to $96,000 in tax revenues to McCracken County.[103]

McCracken Solar is under a 20-year contract with BREC to sell 100 percent of the produced electricity at a fixed price of $27.30 per MWh.[104] Assuming no solar degradation, the output value of the electricity produced over the contact period is $62.7 million.[105] The economic output of the site converted for solar production is significantly greater than the value of the land's economic output if it were to remain in agricultural use.[106]

Having reviewed the record, the Siting Board finds that the McCracken Solar facility will have a positive economic impact on the region.

[100] *Id.* at unnumbered page 148.

[101] *Id.*

[102] *Id.*

[103] *Id.* at unnumbered page 149.

[104] *Id.* at unnumbered page 150.

[105] *Id*. *See also* McCracken County Solar's Responses to Siting Board Staff's First Request for Information, Item 10, at 20.

[106] Application, Volume 1, Exhibit 10, Attachment 10.1 at unnumbered page150.

Existence of Other Generating Facilities

The location of the McCracken Solar facility does not contain any other generating facilities. McCracken Solar investigated the feasibility of locating the proposed facility on a site where existing electric generating facilities were located. However, no such location in McCracken County was identified.[107] McCracken Solar will be able to interconnect its solar facility to that of a nearby on-site existing 69 kV transmission line, (McCracken County – Shell line), owned by-. BREC system is part of a regional transmission network managed by the Midcontinent Independent System Operators (MISO).[108]

Local Planning and Zoning Requirements

The Project complies with McCracken County Ordinance No. 2021-03. Pursuant to Ordinance No. 2021-03, Level 2 Solar Energy Systems (defined as ground-mounted systems greater than one-half (1/2) acre or greater in size for the commercial production of electricity and transmission to a public utility) are required to be set back 100 feet from all exterior property lines. Additionally, Solar Energy Systems that extend across multiple parcels do not have to follow setback requirements for property lines located within the security fencing.[109] McCracken Solar certifies that the Project will be in compliance with all local ordinances and regulations, if any, concerning noise control and with McCracken County Ordinance No. 2021-03, and all other applicable local planning and zoning ordinances.[110]

[107] Application, Volume I, Exhibit 7 at unnumbered page 104.

[108] Application, Volume I, Exhibit 9 at unnumbered page 106.

[109] Application, Volume I, Exhibit 4 at unnumbered page 22.

[110] *Id.*

The Siting Board finds that McCracken Solar's certification that the proposed solar 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

McCracken Solar contends that the proposed facility's effect on the electricity transmission system of Kentucky will be minimal, and anticipates that any costs related to upgrades to the electricity transmission system of Kentucky related to the proposed facility will be borne by McCracken Solar.[111] In April of 2020, McCracken Solar contacted BREC to inquire about the capacity of the 69 kV McCracken County-Shell transmission line, the proposed point of interconnection for the Project. At that time, BREC reported that the line was rated at 52 MVA, that the rating could potentially be increased to 62 MVA with a minor upgrade, and that it could be further increased to 72 MVA with a major upgrade.[112] BREC estimated that the minor upgrade required to accommodate 60 MW (increasing the line rating from 52 MVA to 62 MVA) would cost approximately $50,000. On this basis, McCracken Solar chose to plan for a 60 MW solar project.[113]

In April 2021, in order to provide additional information regarding the proposed facility's projected effect on the electricity transmission system, the Applicant engaged a third-party engineering consultant to determine the ability of the transmission grid to accommodate the export of up to 60 MW from the Project when interconnecting to the

[111] Application, Volume I, Exhibit 9 at unnumbered page 106.

[112] *Id*.

[113] *Id*.

69 kV McCracken County–Shell transmission line.[114] The consultant, Electric Power Engineers (EPE) performed a study with load flow calculations using the MISO 2025 Summer Peak model, and the conclusions of the EPE study generally align with the initial information provided to McCracken Solar by BREC that minor upgrades allow the transmission line to accommodate 60MW.[115]

Having reviewed the record, the Siting Board finds that the proposed solar facility will have a minimal effect on the electricity transmission system of Kentucky, which can be mitigated by a minor system upgrade to be funded by the Applicant.

Compliance with Setback Requirements

McCracken Solar's application details the applicable setback requirements at issue, advising that KRS 278.704(3) states:

> If the merchant electric generating facility is proposed to be located in a county or a municipality with planning and zoning, then setback requirements from a property boundary, residential neighborhood, school, hospital, or nursing home facility may be established by the planning and zoning commission. Any setback established by a planning and zoning commission for a facility in an area over which it has jurisdiction shall:
>
> (a) Have primacy over the setback requirement in subsections (2) and (5) of this section; and
>
> (b) Not be subject to modification or waiver by the board through a request for deviation by the applicant, as provided in subsection (4) of this section.[116]

The Project is to be located in McCracken County. The McCracken County Planning and Zoning Commission recommended, and the McCracken County Fiscal Court approved,

[114] *Id.* at unnumbered page 107.

[115] *Id*.

[116] Application, Volume I, Exhibit 12 at unnumbered page 187.

Ordinance 2021-03 amending the McCracken County Zoning Code and establishing regulations relating to solar energy systems (Solar Ordinance).[117] Under the Solar Ordinance, the proposed solar facility would be defined as a Level 2 Solar Energy System.[118] The setback requirements for Level 2 Solar Energy Systems are 100 feet from all exterior property lines, and Solar Energy Systems that extends across multiple parcels do not have to follow setback requirements for property lines located within the security fencing.[119]

Wells Engineering found that the local solar ordinance requires a setback of 100 feet and that the setbacks provide by McCracken Solar meet that requirement.[120] Wells Engineering recommends the following mitigation measures:

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

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

Having reviewed the record and being otherwise sufficiently advised, the Siting Board finds that McCracken Solar has demonstrated the proposed facility as designed and as located satisfies all applicable regulations or statutes. The proposed Site Plan more than satisfies requirements of the Solar Ordinance as well as the precedent the

[117] *Id*.

[118] *Id*.

[119] *Id*.

[120] Consultant's Report at 35.

Siting Board has set, as the enhanced setbacks far exceed the 150-foot setback requirements for solar panels and string inverters, and 450-foot setback requirement for a central inverter the Siting Board has supported in prior cases. The Siting Board notes that the mitigation requirements imposed in the Compatibility with Scenic Surroundings and Noise and Anticipated Noise Level sections will also provide some level of protection for persons occupying a property adjacent to the proposed solar facility with respect to noise, obstruction of views, and traffic. Further, additional mitigation measures outlined in Appendix A will further serve to provide protection for residents of the general area.

History of Environmental Compliance

McCracken Solar sates that neither McCracken Solar, nor any person or entity with an ownership interest in McCracken Solar, has violated any state or federal environmental laws or regulations. There are no known actions, whether judicial or administrative, pending against McCracken Solar, nor any person or entity with an ownership interest in McCracken Solar.[121]

KRS 278.710(1)(i) directs the Siting Board to consider whether the Applicant has a good environmental compliance history. In light of McCracken Solar's verified statement and no evidence to the contrary, the Siting Board finds that McCracken Solar has satisfied the requirements of KRS 278.710(1)(i). Nevertheless, the Applicant shall seek approval for any change in control or ownership so the Siting Board can ensure ongoing compliance with the law that no entity with a proposed ownership interest in the Project, has violated any state or federal environmental laws or regulations, and that there

[121] Application, Volume I, Exhibit 11 at unnumbered page 181.

are no pending actions against any entity with a proposed ownership interest in the Project.

Decommissioning

McCracken Solar states that the proposed solar facility would have an expected useful life of at least 30 years.[122] McCracken Solar has not yet provided a formal decommissioning plan. Chris Killenberg in his capacity as Project Developer of McCracken Solar, responsible for overall project development including decommissioning, provided testimony that though McCracken Solar has not provided a formal decommissioning plan for the Project the Applicant is committed to principles regarding the decommissioning of the site with the participating landowners.

Mr. Killenberg advised that in the leases, McCracken Solar has an obligation to the landowners that prior to construction a third-party engineer unassociated with the Project and mutually agreed on by the landowners will be hired to examine the construction plan and determine the cost of decommissioning net of the salvage value of the materials on site. The engineer's finding are then presented to the landowners, and they must approve. If the landowners approve, prior to construction, McCracken Solar will post a bond or other type of financial security for the landowners to access if McCracken Solar fails to meet its decommissioning obligations. Mr. Killenberg also advised that that the county has an ordinance requiring McCracken Solar to post 1 percent of the construction cost with the county for potential decommissioning. The leases with the landowners require McCracken Solar to post whichever of these financial securities is greater, and the decommissioning cost estimate will be reviewed and revised every five years of the

[122] Application, Volume I Exhibit 9 at unnumbered page 139.

Project. However, Mr. Killenberg also testified that when McCracken Solar gets closer to construction and has the final construction plan, the decommissioning plan will be specifically laid out in a document, and it will be filed with the county.

The Consultant's Report has no mitigation measure or recommendations regarding decommissioning of the McCracken Solar facility.

The Siting Board finds mitigation measures are necessary to ensure that all parties are protected from potential nonperformance. The Siting Board will require McCracken Solar to implement mitigation measures that require McCracken Solar and its successors and assigns to meet all land restoration requirements in the leases with participating landowners, as well as mitigation measures that require a decommissioning plan specific to McCracken Solar Project. These mitigation measures are outlined in Appendix A to this Order.

CONCLUSION

After carefully considering the criteria outlined in KRS Chapter 278, the Siting Board finds that McCracken Solar 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 here and listed in Appendix A to this Order. A map showing the location of the proposed solar generating facility is attached as Appendix B to this Order.

IT IS THEREFORE ORDERED that:

1. McCracken Solar's application for a Certificate to Construct an approximately 60 MWac merchant solar electric generating facility in McCracken County,

Kentucky, is conditionally granted subject to full compliance with the mitigation measures and conditions prescribed in Appendix A to this Order.

2. McCracken Solar shall fully comply with the mitigation measures and conditions prescribed in Appendix A to this Order.

3. In the event mitigation measures within the body of this Order conflict with those prescribed in Appendix A, the measures in Appendix A shall control.

4. This case is closed and removed from the commission's docket.

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By the Kentucky State Board on Electric
Generation and Transmission Siting

ENTERED
OCT 30 2021
bsb
KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:

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

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO. 2020-00392 DATED OCT 30 2021

MITIGATION MEASURES AND CONDITIONS IMPOSED

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

1. A final site layout plan shall be submitted to the Siting Board upon completion of the final site design. Deviations from the preliminary site layout provided in the McCracken Solar's Responses to the Post-Hearing Request for Information should be clearly indicated on the revised graphic. Those changes shall include, but are not limited to, location of solar panels, inverters, transformers, substation, operation and maintenance building or other Project facilities and infrastructure.

2. Any change in the Project boundaries from the information that formed this evaluation shall be submitted to the Siting Board for review.

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

4. A final, Project specific, construction schedule, including revised estimates of on-site workers and commuter vehicle traffic, shall be submitted to the Siting Board. Deviations from the preliminary construction schedule provided in this matter should be clearly indicated.

5. The Board will determine if any deviation to the construction schedule or workforce estimates is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if yes, the Applicant will support the Siting Board's effort to revise its assessment of impacts and mitigation requirements.

6. The Applicant 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.

7. The Applicant's access control strategy shall also include appropriate signage to warn potential trespassers. The Applicant must ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.

8. According to National Electrical Safety Code regulations, the security fence must be installed prior to any electrical installation work. The substation shall have its own separate security fence and locked access installed.

9. Existing vegetation between solar arrays and nearby roadways and homes shall be left in place to the extent feasible to help minimize visual impacts and screen the Project from nearby homeowners and travelers.

10. McCracken Solar shall implement planting of native evergreen species as a visual buffer to mitigate viewshed impacts, particularly in areas directly adjacent to the Project without existing vegetation.

11. McCracken Solar shall carry out visual screening consistent with the plans proposed in its application and Site Assessment Report and ensure proposed new vegetative buffers are successfully stablished and develop as expected over time. Should

vegetation used as buffers die over time, McCracken Solar shall replace them as appropriate.

12. The Applicant shall provide a visual buffer between Project infrastructure and residences or other occupied structures with a line of sight to the facility to the reasonable satisfaction of the affected adjacent property owners. If vegetation is used, plantings should reach eight feet high within four years. To the extent that an affected adjacent property owner indicates to the Applicant that such a buffer is not necessary, McCracken Solar will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

13. McCracken Solar shall cultivate at least two acres of native pollinator-friendly species onsite.

14. McCracken Solar will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.

15. McCracken Solar shall fix or pay for damage resulting from any vehicle transport to the Project site. For damage resulting from vehicle transport in accordance with all permits, those permits will be controlling.

16. McCracken Solar shall comply with all laws and regulations regarding the use of roadways.

17. McCracken Solar shall implement ridesharing between construction workers when feasible, use appropriate traffic controls or allow flexible working hours outside of peak hours to minimize any potential delays during AM and PM peak hours.

18. The Applicant shall consult with the Kentucky Transportation Cabinet (KTC) regarding truck and other construction traffic and obtain necessary permits from the KTC.

19. The Applicant shall consult with the McCracken County Road Department (MCRD) regarding truck and other construction traffic and obtain necessary permits from the MCRD.

20. The Applicant shall develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.

21. McCracken Solar shall comply with any road use agreement executed with MCRD or KTC. Such an agreement might consider special considerations for overweight loads, routes utilized by heavy trucks, road weight limits, and bridge weight limits.

22. McCracken Solar shall develop and implement a traffic management plan to minimize the impacts on traffic flow and keep traffic safe. Any such traffic management plan shall also identify any noise concerns during the construction phase and develop measures that would address those noise concerns.

23. McCracken Solar shall properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process. Dust impacts shall be kept at a minimal level. The Siting Board expects the Applicant's compliance with 401 KAR 63:010.

24. McCracken Solar is required to limit the construction activity, process, and deliveries to the hours between 8 a.m. and 6 p.m. Monday through Saturday. Non-noise-causing and non-construction activities can take place on the site between 7 a.m. and 10

p.m., Monday through Sunday, including field visits, arrival, departure, planning meetings, mowing, surveying, etc.

25. McCracken Solar shall notify residents and businesses within 2,400 feet of the Project boundary about the construction plan, the noise potential and mitigation plans one month prior to the start of construction.

26. If the pile driving activity occurs within 1,500 feet of a noise sensitive receptor, McCracken Solar shall 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).

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

28. McCracken Solar shall place panels, inverters and substation equipment consistent with the distances to noise receptors indicated in McCracken Solar's noise and traffic study and with its proposed setbacks, as amended herein. Nevertheless, McCracken Solar shall not place solar panels or string inverters, if used, closer than 150 feet from a residence, church or school, 25 feet from non-participating adjoining parcels, and 50 feet from adjacent roadways. McCracken Solar shall not place a central inverter, and, if used, energy storage systems closer than 450 feet from a residence, church, or school. These setbacks shall not be required for residences owned by landowners

involved in the Project that explicitly agree to lesser setbacks and have done so in writing. All agreements by participating landowners to lesser setbacks must include language advising the participating landowners of what the standard setback required by the order is. All agreements by participating landowners to lesser setbacks must be filed with the Siting Board prior to commencement of construction of the Project.

29. As applicable to individual lease agreements, McCracken Solar, its successors, or assigns will abide by the specific land restoration commitments agreed to by individual property owners, as described in each executed lease agreement.

30. McCracken Solar shall file a full and explicit decommissioning plan with the Siting Board upon completion. This plan shall commit McCracken Solar to removing all facility components, aboveground and belowground, regardless of depth, from the Project site. Upon its completion, this plan shall be filed with the Siting Board or its successors. The decommissioning plan shall be completed at least one month prior to construction of the Project.

31. McCracken Solar shall be required to file a bond with McCracken County Fiscal Court, equal to the amount necessary to effectuate the explicit or formal decommissioning plan naming McCracken County as an oblige or a third-party (or secondary, in addition to individual landowners) beneficiary, in addition to the lessors of the subject property insofar as the leases contain a decommissioning bonding requirement, so that McCracken County will have the authority to draw upon the bond to effectuate the decommissioning plan. For land in which there is no bonding requirement otherwise, McCracken County shall be the primary beneficiary of the decommissioning bond for that portion of the Project. The bond(s) shall be filed with the McCracken County

Treasurer or with a bank, title company or financial institution reasonably acceptable to the county. The acceptance of the County of allowing the filing the bond(s) with an entity other than the Fiscal Court, through the County Treasurer, can be evidenced by a letter from the Judge Executive, the fiscal court, or the County Attorney. The bond(s) shall be in place at the time of commencement of operation of the Project. The bond amount shall be reviewed every five years at McCracken Solar's expense to determine and update the cost of removal amount. This review shall be conducted by an individual or firm with experience or expertise in the costs of removal or decommissioning of electric generating facilities. Certification of this review shall be provided to the Siting Board or its successors and the McCracken County Fiscal Court. Such certification shall be by letter and shall include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

32. If any person shall acquire or transfer ownership of, or control, or the right to control the Project, by sale of assets, transfer of stock, or otherwise, or abandon the same, McCracken Solar or its successors or assigns shall request explicit approval from the Siting Board with notice of the request provided to the McCracken County Fiscal Court. In any application requesting such abandonment, sale or change of control, the Applicant shall certify its compliance with KRS 278.710(1)(i).

33. McCracken Solar or its assigns must provide notice to the Siting Board if during any two-year (730-day) period, it replaces more than twenty percent of its facilities. McCracken Solar shall commit to removing the debris and replaced facility components from the Project site and McCracken County upon replacement. If the replaced facility components are properly disposed of at a permitted facility, they do not have to be

physically removed from McCracken County. However, if the replaced facility components remain in McCracken County, McCracken Solar must inform the Siting Board of where the replaced facility are being disposed of.

34. Any disposal or recycling of Project equipment, during operations or decommissioning of the Project, shall be done in accordance with applicable laws and requirements.

35. Ten days prior to the commencement of construction, the Applicant shall provide a detailed plan on how they will protect water resources in the Project area. The site assessment documents in several locations say that certain mitigation measures regarding erosion and protection of water resources “may” be carried out. This needs to be clearly specified.

36. McCracken Solar shall coordinate with the West Kentucky Wildlife Management Area (WMA) to ensure, to the extent practicable, noise-causing construction activities do no coincide with planned events taking place within the WMA that occur during the hours between 8 a.m. and 6 p.m. Monday through Saturday.

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE NO. 2020-00392 DATED OCT 30 2021

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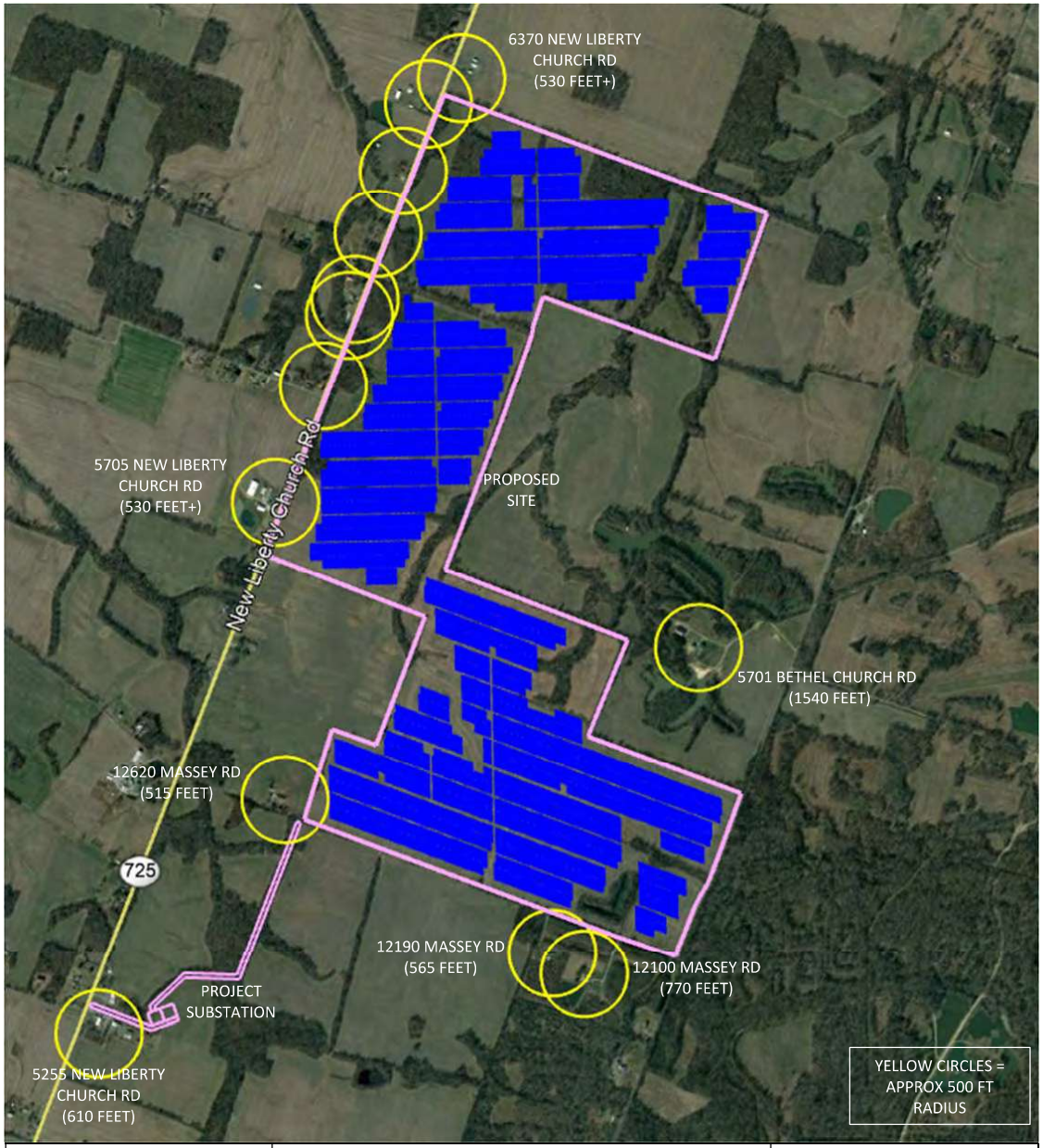

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MCCRACKEN COUNTY SOLAR - 60MW SOLAR PROJECT
MCCRACKEN COUNTY, KY

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NEW LIBERTY CHURCH RD, KEVIL, KY 42053
LAT/LONG: 37.12 N / 88.86 W
DATE: 5.3.2021

MAP SHOWING THE DISTANCE OF THE PROPOSED SITE FROM THE NEAREST RESIDENTIAL STRUCTURES

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