

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)	

SITING BOARD STAFF'S INITIAL REQUEST FOR INFORMATION
TO GLOVER CREEK SOLAR, LLC

Glover Creek Solar, LLC (Glover Creek), pursuant to 807 KAR 5:001, is to file with the Siting Board an electronic version of the following information. The information requested herein is due on June 1, 2020. The Siting Board directs Glover Creek to the March 16, 2020 and March 24, 2020 Orders in Case No. 2020-00085¹ regarding filings with the Public Service Commission.² The Siting Board expects the original documents to be filed with the Siting Board within 30 days of the lifting of the current state of emergency. Responses to requests for information in paper medium shall be appropriately bound, tabbed, and indexed. Responses that are required to be provided

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 16, 2020), Order at 5–6. Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 24, 2020), Order at 1–3.

² Pursuant to KRS 278.702(3), the Siting Board is attached to the Public Service Commission for administrative purposes and staff of the Public Service Commission serves as permanent administrative staff for the Siting Board. Also, pursuant to 807 KAR 5:110, Section 3, all filings in a Siting Board proceeding should be filed at the offices of the Public Service Commission.

on electronic medium shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Glover Creek shall make timely amendment to any prior response if Glover Creek obtains information which indicates that the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Glover Creek fails or refuses to furnish all or part of the requested information, Glover Creek shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When filing a paper containing personal information, Glover Creek shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Refer to the application generally. Provide copies of all written or electronic correspondence pertaining the project received from neighboring property owners and other members of the general public and any corresponding responses.
2. Refer to the application, Volume 1, Section 2. Description of Proposed Site.
 - a. Provide a description of the land acquisition process in which Glover Creek obtained the 400 acres of land for the proposed solar facility site.
 - b. State whether the solar panels consist of monocrystalline or polycrystalline solar cells and why Glover Creek decided on that type of material.
 - c. With respect to the evergreen shrubs that will be planted, state how high those shrubs are expected to grow.
3. Refer to the application, Volume 1, Section 6. Public Notice Report.
 - a. Provide copies of all displays and handout materials that were used as part of the public outreach efforts of Glover Creek.
 - b. Identify any concerns that were received by Glover Creek resulting from the public outreach efforts and state how Glover Creek addressed those concerns.
4. Refer to the application, Volume 1, Section 9, Effect on Kentucky Electricity Generation System.
 - a. Explain why the Feasibility Study and the System Impact Study references the proposed solar facility's total capacity as 35 MW.
 - b. State the purpose of the Facilities Study and whether Glover Creek anticipates any issues will be identified as part of that particular study.
5. Refer to the application, Volume 1, Attachment G – Economic Impact Report, regarding the section discussing Regenerative Energy. Provide additional details

on this method, discussing, among other things, how long Silicon Ranch Corporation (Silicon Ranch) has utilized this concept, how many other Silicon Ranch solar facilities implement Regenerative Energy land management techniques, the results from these other solar facilities that utilize Regenerative Energy, what specific Regenerative Energy farming practices will be implemented at the proposed Glover Creek solar facility, and whether any local farmers and ranchers have been recruited to implement these practices.

6. Refer to the application, Volume 2, Site Assessment Report (SAR) Section 1, Description of Proposed Site, Item 5. The description references Turkey Creek. Explain whether the reference should be Glover Creek.

7. Refer to the application generally. Provide a breakdown of the total cost of the project, including contingencies.

8. Refer to the SAR Section 2, Compatibility with Scenic Surroundings. The language of the last two paragraphs on the page are identical to the same page in the application of Turkey Creek Solar LLC (Turkey Creek) in Case No. 2020-00040³. Confirm the accuracy of the last two paragraphs in the instant application, or provide the correct information for Glover Creek.

9. Refer to the SAR Section 4, Anticipated Noise Levels at Property Boundary. This page is identical to the same page in the application of Turkey Creek in Case No. 2020-00040.⁴ Confirm the accuracy of this Section.

³ See Case No. 2020-00040, *In The Matter of the Application of Turkey Creek Solar, LLC for a Construction Certificate to Construct a Merchant Electric Generating Facility*, (Filed March 27, 2020).

⁴ *Id.*

10. Refer to the SAR Section 4, Anticipated Noise Levels at Property Boundary. Garrard County noise ordinances are discussed. Explain whether Metcalfe County has noise control ordinances.

11. Refer to the SAR Section 6, Mitigation Measures. The first page of this Section is identical to the same page in the application of Turkey Creek in Case No. 2020-00040.⁵

a. Provide the specific mitigation measures that Glover Creek will undertake for this project.

b. Explain whether Glover Creek has engaged Copperhead Environmental Consulting or some other consulting firm as part of this project.

12. Refer to the SAR, Attachment A – Property Value Impact Report.

a. Describe Kirkland Appraisals, LLC’s experience with performing commercial appraisals evaluating the impact of utility scale solar facilities’ impact on property values.

b. On page 1, the report states that the solar farm is proposed to be constructed on approximately 322 acres out a parent tract assemblage of approximately 968 acres. Explain what is meant by this land description and why it differs from the 400 acres as referenced in other parts of the application.

c. Refer page 5 regarding the research of solar farms in Kentucky. Explain why the solar facilities developed jointly by Louisville Gas and Electric Company and Kentucky Utilities Company in Shelby and Mercer counties, Kentucky, were not part of the research.

⁵ *Id.*

13. Refer to the SAR, Attachment C – Noise and Traffic Assessment, page 1, Section 1.1, regarding the end of life condition. Provide the expected useful life of the propose solar facility and state how Glover Creek or Silicon Ranch will approach the decommissioning of the solar facility in an environmentally impactful manner and maintain the land so that it can be returned to farming or other development.

14. Refer to the SAR, Attachment D – Phase I Environmental Site Assessment Report Section 11.0 page 17 dated February 2020. Section 11 lists five water supply wells, the potential for asbestos containing materials (ACM) on the site, and recommendations pertaining to both findings. Explain whether Glover Creek intends to implement the report recommendations and, if so, the anticipated completion dates of the well closures and ACM survey.

15. Refer to the questions propounded by Harvey Economics, which are attached as an Appendix to this information request, and provide responses to those questions.



Kent A. Chandler
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P.O. Box 615
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DATED MAY 14 2020

cc: Parties of Record

APPENDIX

APPENDIX TO A REQUEST FOR INFORMATION OF THE KENTUCKY STATE
BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE
NO. 2020-00043 DATED MAY 14 2020

[SEVEN PAGES TO FOLLOW]

**FIRST SET OF INQUIRIES ABOUT THE GLOVER CREEK SOLAR LLC
APPLICATION FOR A CONSTRUCTION CERTIFICATE**

The following set of questions are pursuant to our review of the Site Assessment Report (SAR) provided by Glover Creek Solar, LLC's as part of the application submitted to the Kentucky State Board of Electric Generation and Transmission under KRS 278.706 Harvey Economics (HE) has been retained by the Kentucky Public Service Commission to perform the review and evaluation of the SAR. These questions are intended to gain a more complete understanding of the materials provided about proposed Glover Creek Project, to be located at 7449 Randolph-Summer Shade Road, Summer Shade, KY 42166 and to request information that was not found in the Application. HE requests that responses to these questions be provided in writing, supplemented by attachments as needed. HE will clarify any questions which are unclear to the Applicant. HE will review the Applicant responses and seek a follow-up discussion confirming our understanding with the appropriate Glover Creek/Carolina Solar personnel as needed.

I Construction phase activities—Generally, much more information was provided about the operational phase compared with the construction phase. HE is requesting more information about construction, summarized below and detailed in subsequent inquiry categories.

A. Please provide a detailed description of construction activities, including a schedule and description of activities, peak activity periods, number of commuting workers (average by quarter and peak period), personal and construction vehicle traffic volumes (see detailed question below), construction access points to the site and staging area, local roads, State Routes and highways that will carry construction traffic.

II Site development plan—We need to resolve some conflicting information provided about the site development and to better understand certain elements in that site plan.

A. The description of the legal boundaries of the proposed site provided on page 129 of the SAR indicate a total site acreage of about 561 acres. However, other parts of the SAR and supporting documents, (the initial summary description of the proposed site, the Kirkland Appraisals report, the POND report and the Phase 1 Environmental Site Assessment Report) include site descriptions of varying size. Please confirm the acreage of the entire project site, as well as the footprint of the solar facility components.

B. How many solar panels will be installed on-site? How many transformers? Please confirm that there will be 13 energy storage systems (co-located with the 13 inverters).

C. The Application states that a 6-foot fence topped with barbed wire will enclose the facility and that the proposed access gate will be locked with a standard

keypad or combination lock. Will these measures be taken during construction as well as operations to control access and provide security to the site?

- D. Will Big Jack Road (from either SR 90 or SR 640) be the only access point onto the site during construction? During operations? Which entrance (SR 90 or SR 640) will be the primary access point?
- E. The SAR on page 4 states that “the property boundary includes an additional entrance not included in the layout. This additional entrance was discovered during the property boundary survey.” Please provide a written description and illustration of where that entrance is located. Will that entrance be used by construction vehicles or during operations? If not, how will that entrance be controlled?
- F. Preliminary site layout graphics or need for additional maps:
 - 1. Please clearly identify all access points/ entrances/ access roads to the site.
 - 2. Note 5 on the Preliminary Site Layout graphics, pages 315 and 316, indicate a proposed construction staging area - please identify the location of the construction staging area on a map.
 - 3. Please identify the location of each of the 13 inverters/ energy storage systems.
 - 4. Please identify the location of all transformers.
 - 5. Is the existing Summer Shade – Patton Rd Jct 69kv transmission line located in the southernmost utility easement corridor in the graphic? Is that the Eastern KY Power Cooperative transmission line discussed in Vol 1 of the application?
 - 6. What utilities are located in the more northern utility easement corridor?
 - 7. Please explain the differences in the solar array footprints between the two graphics included in the layout on pages 315 and 316. For example, the graphic on page 315 includes solar arrays (in blue) located in the northeast parcel of the property (east of SR 640); the second graphic on page 316 does not include arrays in that area. Please indicate which solar array footprint we should rely upon.
 - 8. Pollinator plantings are identified in the legend on the first graphic, but we could not locate them on the plan. Please locate those plantings on the preferred graphic.

III Setback Deviation Request—The Application requests a deviation of the statutory setback provisions. HE will need a full understanding of why that deviation is justified.

- A. The Application states that Glover Creek Solar will apply for a deviation from the existing setback requirements. What is the justification for requesting such a deviation, i.e. loss of generation capacity, cost, etc.? Could the solar panels and other structures be re-configured within the site boundaries to meet the setback requirements? How will the project meet the goals of the indicated statutes required for a deviation?

IV Property values and land use—Local landowners are often concerned about the effects on their property values during construction and operation. HE requests information about current property values in the area surrounding the site and property value impacts during the construction phase. We also need clarification on certain aspects of the Kirkland report.

A. Construction phase

1. The Application, including the Kirkland Appraisals report, does not address or discuss potential impacts to property values or adjacent land uses during the construction period (from traffic, noise, dust, etc.). Please provide additional discussion / analyses related to potential impacts to property values or changes in land value impacts resulting from construction activity.

B. Operational phase

1. What are the current property values of the properties adjacent to the project site? Property values of raw land or residential values per square foot of developed property in the general Summer Shade area?
2. How is the area of site influence defined, i.e. what is the distance from a solar facility for which property values might be affected?
3. The Kirkland Appraisals report states on page 1 that it evaluates “a solar farm proposed to be constructed on approximately 322.44 acres out of a parent tract assemblage of 968.20 acres.” If the actual footprint of the solar panel structures is larger than 322 acres, then the calculated distance between homes and panels on page 4 of that report may be incorrect. Please resolve this discrepancy.
4. Please resolve the apparent discrepancy related to the yellow shaded area of the graphic included on page 3 of the Kirkland report. That does not appear to be the project boundary (as compared to the legal boundary description provided); however, the discussion following the map addresses the properties surrounding the shaded area.
5. Does the data compiled by Kirkland Appraisals indicate a relationship (positive or negative) in the specific distance between a house and a solar

panel (as opposed to simply being adjacent to the solar property?) For example, the closer the home to a panel, the larger the price differential?

6. For the 37 total solar facilities evaluated, 81 matched pair sets were chosen for a summary evaluation – how were those 37 chosen from the available matched pair data?
7. For the Large Solar Farm analysis beginning on page 94 of the Kirkland report, 21 matched pair sets were chosen for that analysis – how were those chosen?
8. Although the average and or median differences in the matched pair sets generally amounts to about +1% difference in property values adjacent and non-adjacent to solar sites, the range of price differentials is actually larger, ie. -10% to +9%. What does that range indicate about potential impacts of solar facility siting on property values?

V Traffic—Increased traffic from construction and operation can be an issue for local residents. HE is seeking information about construction phase traffic which was not provided in the Application.

- A. Please provide current traffic volume data by vehicle category if available (i.e. cars, trucks by weight class, etc.) for SR 90 in the vicinity of the project area.
- B. Construction phase
 1. How many worker commuter vehicles are expected to drive to the project site each day during construction - on an average day? On a peak day?
 2. Please indicate the hours of the day the workers will arrive and vacate the site.
 3. Please provide an approximate percentage breakdown of where the construction workers will commute from each day, if possible.
 4. Are all workers anticipated to commute from their homes daily, or will any temporary housing be developed on-site?
 5. What types of trucks and other equipment by weight class will access the site daily?
 6. Please provide a breakdown of the traffic volume by truck category above on an average day? On a peak day?
 7. What is the expected maximum weight of the largest vehicles (including any materials or equipment that the truck is hauling)?

8. Can you provide an approximate breakdown by point of origin for the construction truck traffic?
9. Where will the construction crew, supervisors and others park on-site?

VI Dust—Dust especially during the construction phase can be an issue for local residents.

A. Construction phase

1. Are there any plans for paving (or putting down gravel) for roads associated with the project?
2. Are there any improvement plans for Big Jack Road?
3. What will be the protocol or frequency spraying down dirt roads?
4. Have studies been done to indicate how much dust will be created? Please characterize the level of dust impacts expected during construction.

B. Operational phase

1. Will there be grass or vegetation under and around the panels? Will the site be irrigated to promote vegetation or will that be needed?

VII Noise—Similar to dust and traffic, noise especially during construction can be an issue for local residents.

A. Construction phase

1. What is the total anticipated decibel level that will be generated by construction equipment during peak and off-peak times of construction?
2. How much noise will residential properties closest to the project site experience during construction?

B. Operational phase

1. How many motors will be installed on-site?
2. Will all motors, inverters, transformers or other equipment be completely silent at night?
3. Is there a cumulative noise effect for the transformers, inverters, and motors during daytime hours? What is the likely range of that noise?
4. What is the estimated noise level for the “worst-case profile” for the energy storage systems?

5. How far away from the nearest dwelling will the transformers be?

VIII Odor—There can be similar issues related to odor.

A. Construction phase

1. Will there be any odorous effects generated by the construction of the solar panels? What would the sources of those odors be?
2. Will there be odor impacts from diesel fumes or other sources from construction vehicles for nearby residents?
3. Will any hazardous materials be required in the construction of the solar panels at the project site?

IX Topography/ Scenery—Visual impacts can be important for some projects, depending on the topography, surrounding land uses, and the nature of the project. Computer generated imaging is an effective way to demonstrate these effects.

A. Operational phase

1. Will the shrubs be grown outside the fence?
2. Given the assumption that the shrubs planted will grow to 6 feet over the course of 3 years, are there any need to or plans for shielding the view from the 9-foot difference between the tops of the solar panels and the tops of the shrubs?
3. Will there be any glare on either SR 640 or SR 90 as the panels rotate over the course of the day during different times of the year?
4. Are there any computer-generated images of what the solar panels, six-foot fence, and three-foot high shrubs will look like immediately after construction is complete? If yes, HE would like to see those from different viewpoints of the property.

X Public meeting materials—We want to make sure that the information in the Application is consistent with the information provided to the public thus far.

- A. Please provide any documents/ maps/ other materials that have been presented to the community/ other groups as part of outreach efforts. For example, during the public meeting and community dinner held in December of 2019; during meetings with public officials; or during other public presentations.

XI Other permitting activities—HE wants to make sure information provided by the Applicant is consistent with information provided in other permitting processes.

- A. Please list any other permit applications or information which Glover Creek Solar LLC or Carolina Solar Energy has submitted to any public agency for the Glover Creek Solar Project. For instance, the application notes that will pursue a KPDES permit associated with construction activity and an Approved Jurisdictional Determination from the USACE. Please provide copies of any submittals that address any of the specific topics related to resource topics addressed in this inquiry.

XII Economic impact analysis—This topic is not specifically called for in these applications, but the Board will have an interest in project benefits.

- A. On page 146, the report states that “The Project will make a multi-million dollar capital investment in rural central Kentucky that will have direct, indirect, and induced impacts on a broad range of economic activities in the region”. How much money will be spent on purchases of materials, supplies, equipment or other items in Metcalfe County in support of facility construction? In the larger Bowling Green region? Total in Kentucky?
- B. How much sales or use tax revenue would be generated for Metcalf County due to construction activity? For the Bowling Green region? For the State?
- C. Is the estimate of the 300 direct construction jobs created specific to the Glover Creek Project? The footnote on page 146 indicates that estimates are based on “Silicon Ranch’s own projects.”
- D. What approximate percentage of those construction workers will come from Metcalfe County? The Bowling Green area?
- E. Does the Applicant have any estimates of wages specific to Project construction and operational workers as opposed to BLS data?
- F. What are region and industry specific income multipliers available from the Bureau of Economic Activity or through IMPLAN that should be applied here?
- G. Is it correct that the chosen multipliers appear to be applied twice and are therefore double counting the economic effects of the income and spending of construction workers.
- H. How much money will be spent on the purchase of materials / supplies in the local area each year during the operational phase? Metcalf County? Larger Bowling Green area?

XIII Decommissioning

- A. The application package indicates that the life of the project will be 40 years. What will happen to the project site after that time? To the facilities / structures on site?

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