

# **SUMMER SHADE SOLAR, LLC SITE ASSESSMENT REPORT**

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# 1 PROPOSED SITE DEVELOPMENT PLAN

**REQUIREMENT:** *per KRS 278.708 (3)(a); A description of the proposed facility that shall include a proposed site development plan that describes:*

- 1 Surrounding land uses for residential, commercial, agricultural, and recreational purposes;*
- 2 The legal boundaries of the proposed site;*
- 3 Proposed access control to the site;*
- 4 The location of facility buildings, transmission lines, and other structures;*
- 5 Location and use of access ways, internal roads, and railways;*
- 6 Existing or proposed utilities to service the facility;*
- 7 Compliance with applicable setback requirements as provided under KRS 278.704(2), (3), (4), or (5); and*
- 8 Evaluation of the noise levels expected to be produced by the facility*

**COMPLIANCE:** Please see the Application, Section 2 for a detailed description of the proposed Project and Project area. The following items provide information specifically in response to requirements 1 through 8 listed above.

- 1 A detailed description of surrounding land uses is provided in Appendix A: Property Value Impact Report (Kirkland Appraisals, LLC 2025). A summary of land use on parcels adjoining the Project is taken from this report and provided in Table 1 below.

**Table 1. Land Use Adjoining the Summer Shade Solar Project**

Land Use	Percent of Total Adjoining Acres	Percent of Total Adjoining Parcels
Residential	10.95	55.17
Agricultural	37.11	20.69
Religious	0.03	1.15
Utility	0.34	1.15
Agricultural/Residential	51.31	19.54
Commercial	0.25	2.30
Total	100.00	100.00

Source: Kirkland Appraisals, LLC (2025)

- 2 The Project survey boundary is depicted in Appendix B, and the legal descriptions of the participating properties are listed in Appendix C.
- 3 As described in the Application, Section 2, “A fence meeting the National Electric Safety Code requirements, a six-foot wildlife fence, will enclose the solar panels and associated infrastructure. A separate fence will enclose the substation. The Project will comply with the NESC and American National Standards Institute (ANSI) Z535 Safety Sign Standards for Electric Utility Power Plants and Substations to guide the placement of safety signage around the facility.” In addition, Summer Shade Solar or its contractor will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.

- 4 The locations of proposed Project transmission lines and other structures are depicted within the Preliminary Site Layout in Appendix B.
- 5 The locations of preliminarily designed access control points and internal roads are depicted on the Preliminary Site Layout in Appendix B. No railways are present within the proposed Project site.
- 6 The locations of existing and proposed utilities to service the Project are depicted on Preliminary Site Layout in Appendix B. If the project requires auxiliary electrical service, it will be acquired from the retail electric supplier for the area, which is either Farmers RECC or Tri-County REMC. At this time, no utility water/sewage lines are expected to be built or used for the Project. Any water needs would be provided either via proposed on-site groundwater wells or by delivery via water trucks.
- 7 As stated in Section 5 of the Application, there are six residential neighborhoods (as defined by KRS 278.700 (6)), within two thousand (2,000) feet of the Project, but no schools, hospitals, or nursing homes are located within that range. Pursuant to KRS 278.704(4), Summer Shade Solar will seek a deviation from this setback requirement.
- 8 The construction and operational noise study report provided in Appendix D identifies the noise levels expected by the facility. The findings are further explained in Section 3 below.

## 2 COMPATIBILITY WITH SCENIC SURROUNDINGS

REQUIREMENT: *per KRS 278.708 (3)(b); An evaluation of the compatibility of the facility with scenic surroundings.*

COMPLIANCE: The Project site is located in an agricultural and rural residential area of Metcalfe County. As noted by Richard Kirkland in his report attached as Appendix A, “larger solar farms using fixed or tracking panels are a passive use of the land that is in keeping with a rural/residential area. . . . The solar panels are all less than 15 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse and lower than a single-story residential dwelling. Were the subject property developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as these proposed panels.”

The Project will adhere to the additional vegetative screening plan presented in Attachment B to the Application. This will help ensure that the Project will be compatible with the scenic surroundings. The screening plan proposes to use native evergreen species in three offset rows with an approximate width of 20 feet and six feet in height at planting. Vegetative screening is proposed along Summer Shade Road towards the north end of the Project. In the central and southern portions of the Project screening is proposed along George Lynn Road, Goodson Chapel Road, Apple Grove Road, Old Goodson School Cyclone Road, and Clifton Smith Road at the Project extents. Screening was located where existing vegetation was not present or would not adequately screen residences near the Project to reduce or eliminate the visual impacts to the scenic surroundings.

A glare assessment was conducted and is provided in Appendix G. Results of the study showed that no harmful red glare is predicted for the airports in the area or drivers along roadways in the vicinity of the PV array. There are indications that, at certain limited times during the day, there may be green or yellow glare for nearby roads. Vehicles are expected to travel through these areas of glare within a few seconds and will not experience the full duration of the predicted glare. In addition, even though the glare is not severe, Summer Shade has attempted to mitigate some of the glare impact through its screening plan, which is contained in Appendix B to the Site Assessment Report.

No harmful red glare is predicted for residents of homes in the vicinity of the PV array. Green and/or yellow glare is predicted for residents in all but two of the 54 structures, primarily houses, included in the analysis. This glare is predicted to occur at either sunrise or sunset when glare from the sun may override much of the glare effect from the panels. While no glare is predicted for seven houses in Block 2 and in seven houses in Block 4, all but two of these houses are included with other blocks where they are predicted to see glare. Only Observation Points 9 and 10 in Block 2 are not predicted to see glare.

### 3 PROPERTY VALUE IMPACTS

REQUIREMENT: *per KRS 278.708 (3)(c); The 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.*

COMPLIANCE: Please refer to the Property Value Impact Report provided as Appendix A (Kirkland Appraisals LLC 2025). In his transmittal letter, Mr. Kirkland provides the following conclusions on page 1.

The matched pair analysis shows no impact on home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land where the solar farm is properly screened and buffered. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar farm is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

Data from the university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar farm with proper setbacks and landscaped buffers.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved with adjoining agricultural uses, schools, churches, and residential developments.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting properties and that the proposed use is in harmony with the area in which it is located. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is minimal traffic.

## 4 ANTICIPATED NOISE LEVELS

**REQUIREMENT:** *per KRS 278.708 (3)(d); Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the project boundary*

**COMPLIANCE:** See Appendix D for a report studying the anticipated operational and construction noise levels as studied and measured at nearby Sensitive Receptors (SR). The excerpt below is a brief summary found on pages 13-14.

An operational sound analysis was completed for the Summer Shade Solar Project to evaluate the impact of Project-generated sound on nearby noise-sensitive receptors. Quantitative noise regulations applicable to the Project were not identified. Therefore, an operational Project noise goal of 55 dBA during the day and 50 dBA at night was recommended. An operational noise model was developed and utilized to estimate the sound levels generated by Project equipment, including noise from the proposed solar array inverter stations, a substation transformer, and BESS equipment.

The solar generation portion of the Project will only produce electricity between sunrise and sunset. After sunset, the site no longer receives solar radiation, and the inverters will shift into stand-by mode and generate minimal noise. Although the solar arrays will only generate power during daylight hours, the Project substation power transformer and BESS equipment will operate periodically during daytime and nighttime hours.

The maximum Project-generated sound level was estimated to be 43 dBA during the daytime and nighttime periods at the closest residence. The noise assessment results demonstrate that Project operational sound levels are not expected to exceed the recommended Project noise goal of 55 dBA during the day and 50 dBA during the night.

The operational sound assessment conservatively assumed that inverters would be in operation at all primary and secondary solar arrays and that the substation transformer and BESS equipment will be operating continuously. There will likely be less equipment operating than what was assumed in this assessment; thus, overall sound levels are also expected to be lower than estimated herein.

A construction sound analysis was also completed considering impact pile driving and other typical construction equipment. Worst-case construction sound levels at the nearest residence are expected to range from 67 to 90 dBA with multiple pieces of equipment operating simultaneously. At times, construction activities will be audible at nearby residences or other noise-sensitive receptors. However, not all equipment will be operating at the same time, and activities will be temporary in duration and located throughout the Project area.



## 5 EFFECT ON ROAD AND RAILWAYS

REQUIREMENT: *per KRS 278.708 (3)(e); The impact of the facility's operation on road and rail traffic to and within the facility, including any anticipated degradation of roads and lands in the vicinity of the facility*

COMPLIANCE: The report provided in Appendix F discusses the Project's impact on road and rail traffic, and possible degradation of roads as a result of the Project. The following is the conclusion of the report on page 14.

The construction period will not produce significant operational changes to existing roadways. All roadways within the Project area will continue to operate at an acceptable level of service (LOS) (A or B) during peak construction traffic. Although no significant adverse traffic impacts are expected during Project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of peak hours could be implemented to minimize any potential for delays during the AM and PM peak hours.

## 6 MITIGATION MEASURES

**REQUIREMENT:** per KRS 278.708(4): *The site assessment report shall also suggest any mitigating measures to be implemented by the applicant to minimize or avoid adverse effects identified in the site assessment report; and per KRS 278.708(6): The applicant shall be given the opportunity to present evidence to the board regarding any mitigation measures. As a condition of approval for an application to obtain a construction certificate, the board may require the implementation of any mitigation measures that the board deems appropriate.*

**COMPLIANCE:** Specific mitigation measures are listed below.

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 should be clearly indicated on the revised graphic. Those changes could include, but are not limited to, location of solar panels, inverters, transformers, substation, operation and maintenance building, transmission line route, or other Project facilities and infrastructure.
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 whether any deviation in the boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts.
4. Summer Shade Solar shall provide the date construction will commence to the Siting Board and the Kentucky Energy and Environment Cabinet (EEC) 30 days prior to that date.
5. Prior to construction, Summer Shade Solar shall provide a finalized Emergency Response Plan to the local fire district, first responders, and any County Emergency Management Agency. Summer Shade Solar shall provide site specific training for local emergency responders at their request. Access for fire and emergency units shall be set up after consultation with local authorities.
6. Summer Shade Solar or its contractor will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.
7. Summer Shade Solar's access control strategy shall also include appropriate signage to warn potential trespassers. Summer Shade Solar must ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.
8. The security fence must be installed prior to activation of any electrical installation work in accordance with NESC standards. The substation shall have its own separate security fence and locked access installed in accordance with NESC standards.
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. Summer Shade Solar will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.
10. Summer Shade Solar shall implement planting of native evergreen species as a visual buffer to mitigate visual viewshed impacts, in areas where those viewshed impacts occur from residences or roadways directly adjacent to the Project and there is not adequate existing vegetation. If it is not adequate, then vegetation ten feet thick reaching six feet at maturity (in four years) will be added by Summer Shade Solar between Project infrastructure and residences, or other occupied structures, with a line of sight to the facility to the

reasonable satisfaction of the affected adjacent property owners. Planting of vegetative buffers may be done over the construction period; however, Summer Shade Solar should prioritize vegetative planting at all periods of construction to reduce viewshed impacts. All planting shall be done prior to the operation of the facility.

11. Summer Shade Solar shall cultivate at least two acres of native, pollinator friendly species on-site.

12. Summer Shade Solar shall carry out visual screening consistent with the plan proposed in its application, SAR, and the maps included, and ensure that the proposed new vegetative buffers are successfully established and developed as expected over time. Should vegetation used as buffers die over time, Summer Shade Solar or its contractor shall replace plantings as necessary.

13. To the extent that an affected adjacent property owner indicates to Summer Shade Solar that a visual buffer is not necessary, Summer Shade Solar will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

14. Summer Shade Solar is required to limit construction activity, process, and deliveries, including field visits, arrival, departure, planning, meetings, surveying, etc to the hours between 6 a.m. and 10 p.m. local time, Monday through Saturday. Select non-noise causing activity and non-construction work may be required during night hours when equipment is not energized. The Siting Board directs that construction activities that create a higher level of noise, such as pile-driving, will be limited to 7 a.m. to 9 p.m. local time, Monday through Saturday.

15. If the pile-driving activity occurs within 1,000 feet of a noise-sensitive receptor, Summer Shade 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). Summer Shade Solar can forego using noise suppression measures if it employs a panel installation method that does not use pile driving, so long as that method does not create noise levels similar to pile driving.

16. Summer Shade Solar shall notify residents and businesses within 2,400 feet of the project boundary about the construction plan, the noise potential, any mitigation plans, and its Complaint Resolution Program at least one month prior to the start of construction.

17. Summer Shade Solar shall place panels, inverters, and substation equipment consistent with the distances to noise receptors to which it has committed in its maps and site plans. However, Summer Shade 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, or 50 feet from adjacent roadways. Summer Shade Solar shall not place a central inverter, and if used, energy storage systems, closer than 350 feet from any adjacent residences, church, or school. These further 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 the setbacks otherwise required herein. All agreements by participating landowners to lesser setbacks must be filed with the Siting Board prior to commencement of the Project.

18. Summer Shade Solar shall fix or pay for repairs for damage to roads and bridges resulting from any vehicle transport to the site. For damage resulting from vehicle transport in accordance with all permits, those permits will control.

19. Summer Shade Solar shall comply with all laws and regulations regarding the use of roadways.

20. Summer Shade Solar shall encourage ridesharing between construction workers when feasible, use appropriate traffic controls, or allow flexible working hours outside of peak hours to minimize any potential

traffic delays during AM and PM peak hours.

21. Summer Shade Solar shall consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

22. Summer Shade Solar shall consult with the Metcalfe County Road Supervisor regarding truck and other construction traffic and obtain any necessary permits from the County.

23. Summer Shade Solar shall develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.

24. Summer Shade Solar shall comply with any road use agreement executed with the County. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits, and bridge weight limits.

25. Summer Shade Solar shall develop and implement a traffic management plan to minimize the impact on traffic flow and keep traffic safe. Any such traffic management plan shall also identify any traffic-related noise concerns during the construction phase and develop measures that would address those noise concerns.

26. Summer Shade Solar shall properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process, including the use of water trucks. Dust impacts shall be kept at a minimal level. The Siting Board requires Summer Shade Solar's compliance with 401 KAR 63:010.

27. If any Person as defined by KRS 278.700(3) shall acquire or transfer ownership of, or control, or the right to control Summer Shade Solar, by sale of assets, transfer of stock, or otherwise, or abandon the same, Summer Shade Solar or its successors or assigns shall notify the Siting Board and shall notify the Metcalfe County Fiscal Court. In any notification of such abandonment, sale, or change of control, Summer Shade Solar and any proposed entity with an ownership interest in Summer Shade Solar shall certify its compliance with KRS 278.710(1)(i).

28. As applicable to individual lease agreements, Summer Shade 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.

29. Summer Shade Solar has filed a complete and explicit decommissioning plan with the Siting Board. If this decommissioning plan should change, Summer Shade Solar shall submit an updated decommissioning plan pursuant to KRS 278.710(8).

30. Summer Shade Solar or its assigns shall provide notice to the Siting Board, if, during any two-year (730 days) period, it replaces more than 20 percent of its facilities. Summer Shade Solar shall commit to removing the debris and replaced facility components from the Project site and from Metcalfe County upon replacement. If the replaced components are properly disposed of at a permitted facility, they do not have to be physically removed from Metcalfe County. However, if the replaced facility components remain in the County, Summer Shade Solar must inform the Siting Board of the location where the components are being disposed.

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

32. Summer Shade Solar shall initiate and maintain the Complaint Resolution Program provided to the Siting Board in the case record to address any complaints from community members. Summer Shade Solar shall also submit annually a status report associated with its Complaint Resolution Program, providing,

among other things, the individual complaints, how Summer Shade Solar addressed those complaints, and the ultimate resolution of those complaints identifying whether the resolution was to the complainant's satisfaction.

33. Summer Shade Solar shall provide Metcalfe County with contact information for individuals within the company that can be contacted with concerns. This shall include contact information for the general public to reach individuals that can address their concerns. Summer Shade Solar shall update this contact information yearly, or within 30 days of any change in contact information.

34. Within 30 days of entry, Summer Shade Solar shall send a copy of this Order to all the adjoining landowners who previously were required to receive notice of this Project.