Kentucky State Board on Electric Generation and Transmission Siting

Lost City Solar – Case No. 2024-00406

Developed for Elliot Engineering and the Kentucky Public Service Commission- State Board on Electric Generation and Transmission Siting

By Cloverlake Consulting Services, W. Thomas Chaney, President

May 5, 2025

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Cloverlake Consulting Services May 8, 2025

On Behalf of Elliot Engineering, Florence, Kentucky For Lost City Solar LLC, Project-Kentucky State Siting Board on Electric Generation and Transmission Case No: 2024-00406.

Introduction

The Kentucky Public Service Commission, State Siting Board requires that applicants for a certificate for Solar Facilities file an application which details the current state of the affected properties to be used for the facilities. It also requires an assessment of the impact on the properties regarding the natural and human environment. This report assesses the adequacy of the assessment of the natural environment including noise, traffic, dust, historic, archeologic resources, and natural resources including endangered plant and animal species groundwater and surface water.

At its conclusion this adequacy report shows that the application submitted by the applicant, Lost City Solar LLC is fully in compliance with the intent of the Kentucky Revised Statutes.

1.0 Siting Project Description-

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

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:

8. Local noise ordinances.

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 7 listed above.

1 A detailed description of surrounding land uses is provided in Appendix A: Property Valuation Impact Analysis (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 Lost City Project

Land Use Adjoining Parcels	Total Adjoining Acres	Percent of Total Adjoining Parcels
Residential	21.47	81.36
Agricultural	67.22	13.56
Agricultural/Residential	11.31	5.08
Total	**100.00**	**100.00**

Source: Kirkland Appraisals, LLC (2025)

2. The Project survey boundary is depicted in the preliminary site layout attached as 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 (NESC) requirements, typically a six-foot fence with three strings of barbed wire at the top, 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, Lost City Renewables LLC (Lost City) 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 and railways will not be used in support of this Project.

6. The locations of existing and proposed utilities to service the Project are depicted on the preliminary Site Layout in Appendix B. If the project requires auxiliary electrical service, it will be acquired from TVA and delivered to the project substation. 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, no residential neighborhoods (as defined by KRS 278.700 (6)), schools, hospitals, or nursing homes occur within two thousand (2,000) feet of the Project. Pursuant to KRS 278.704 (4), Lost City will not need to seek a deviation from this setback requirement.

8. No local noise ordinance is applicable to the Project (Section 4 of the Application). The noise analysis report in Appendix D evaluates construction and operational noise. It identifies the noise levels expected by the facility. The findings are further explained in Section 4 below:

The data and conclusions contained in the Site Assessment Report for the Lost City Renewables Solar project regarding the Siting Project Description is in compliance with the intent of KRS 278.708.

2.0 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 currently used as agricultural land, currently for corn, soybeans, hay, poultry, cattle, sheep, and goats as well as forested areas. The surrounding areas are agricultural, rural residential, and forested. As noted by Richard Kirkland in his report attached as Appendix A, the solar panels will be similar in height (approximately 10 feet) 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." Solar farms using fixed or tracking panels are a passive use of the land that is in keeping with a rural/residential area. As identified above, solar farms are comparable to larger greenhouses. This is not surprising given that a greenhouse is essentially another method for collecting passive solar energy. The greenhouse use is well received in residential/rural areas and has a similar visual impact as a solar farm. To mitigate the viewshed impacts, Lost City revised preliminary plans to increase distances to residences of solar panels, inverters, and the substation, where feasible (Appendix B). Existing vegetation between site boundary

and nearby roadways and homes will be left in place, to the extent feasible, to help minimize visual impacts and screen the Project from nearby homeowners and travelers. To minimize viewshed impacts and provide screening, Lost City will adhere to the landscape plan presented in Appendix E and will implement planting of native vegetation (e.g., trees and bushes) 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. In these areas, Lost City will add a double planting of native vegetation (40 feet thick and at least six feet at maturity (in four years)). The double planting will be 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/screening will be done over the construction period; however, Lost City will prioritize vegetative planting at all periods of construction to reduce viewshed impacts. All planting will be done prior to the operation of the facility. This will help ensure that the Project will be compatible with the scenic surroundings. Lost City will carry out visual screening consistent with the landscape plan 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, Lost City will replace plantings as necessary. A glare study was conducted to determine if the Project would result in glare to airports, roads, or other sensitive receptors in the vicinity of the Project (Appendix F). Six road segments and 39 observation points (OPs) were analyzed. No modeled glare occurred at the nearest airport (approximately 18 miles away). No red glare occurred at any location on nearby roadways or observation points. Green glare and yellow that has been predicted is expected to occur over the course of a handful of months for relatively short periods of time. As addressed in the study, a more detailed review indicates that little potential exists for glare to materially affect the Project surroundings. Given the adjustments to the modeled results based on tangible factors that would block visibility (e.g., topography, existing or planned vegetation, 6-ft elevated railroad subgrade along US 431), and other factors(e.g., limited traffic on Free Lane) noted above that are likely to reduce the potential for glare impact still further, glare is not expected to adversely influence traffic on nearby modeled roads or modeled OP locations. In the unlikely event that glare were to pose a concern from a given location, mitigation measures that could include enhanced landscaping would be considered.

The data and conclusions contained in the Site Assessment Report for the Lost City Renewables Solar project regarding Compatibility with Scenic Surroundings is in compliance with the intent of KRS 278.708.

3.0 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 2024). In his transmittal letter, Mr. Kirkland provides the following conclusions on page 1. The adjoining properties are well set back from the proposed solar panels with supplemental

landscaping as needed to provide a landscaped buffer. 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 is quiet, and there is minimal traffic.

The data and conclusions contained in the Site Assessment Report for the Lost City Solar project regarding Property Value Impacts is in compliance with the intent of KRS 278.708.

4.0 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 page 17. A construction sound analysis was completed considering impact pile driving and other typical construction equipment. Common sources of construction noise include equipment, such as delivery trucks, backhoes, pile drivers, chain saws, bush hogs, or other large mowers for clearing, that produce maximum sound levels of up to approximately 85 dBA at 50 feet. Construction activities will occur over approximately 12 – 18 months between the hours of 7am and 7pm Monday through Saturday, although activities that create a higher level of noise, such as pile driving, will be limited to 8am – 5pm, Monday through Friday. Construction impacts would be temporary and intermittent, as most equipment would

be phased in and out according to the progress of the Project. At times, construction activities will be audible to nearby residences or other sensitive receptors; however, not all equipment will be operating at the same time, and activities will be temporary in duration and spread throughout the Project area. Pile driving during solar array installation is anticipated to produce the greatest sound level for an extended period of time (approximately six months). Standard solar pile drivers are estimated to produce 84 dBA at a distance of 50 feet (Vermeer 2012). Pile driving may temporarily generate sound levels of 67.4 dBA at the nearest residential receptor, but only for 1 or 2 days when the closest array is being installed; when other arrays are installed, the sound level would be lower. These sound levels represent a worst-case scenario; actual sound levels would likely be lower due to attenuation from vegetation and topography. Construction sounds at a solar project are comparable to other common construction activities that require pile driving due to their temporary and intermittent nature (MAREC 2021). Overall, construction-related noise impacts would be temporary and intermittent, and would not contribute to a significant sound increase when compared to sound currently occurring on or near the site (i.e., the operation of farming equipment for agricultural activities and crop harvesting as well as moderate traffic on the nearby roads). During operation, the ambient sound environment would return to existing levels. The moving parts of the solar panel arrays would produce minimal sound. At the nearest residence, the inverters would produce sound levels of approximately 40.9 dBA, and the Project substation transformer would emit approximately 30.5 dBA. These sound levels are below typical background sound levels in rural areas. In addition, nighttime operation will result in lower sound emissions, as power will not be generated and therefore the solar inverters and substation transformer will be operating in stand-by mode. As a result, impacts of Project operation are anticipated to be minimal to negligible. Light truck vehicle noise from maintenance employees commuting to the site or driving on the site would be negligible in the context of existing local traffic levels and sounds. Maintenance activities such as periodic mowing of vegetation surrounding the solar panels would produce sound levels comparable to those of agricultural operations in and near the PSA. Mowing equipment, if used, would generate temporary sound levels of up to 59 dBA at the nearest residential receptor. This periodic mowing would produce sound levels comparable to roadway traffic in thhe surrounding area, although at less frequent intervals. Lost City anticipates primarily using sheep and solar grazing to maintain vegetation and therefore, the Project will generate less noise during vegetation management than the average solar project. As a result, impacts of

Project maintenance is anticipated to be negligible.

The data and conclusions contained in the Site Assessment Report for the Lost City Solar project regarding Anticipated Noise Levels is in compliance with the intent of KRS 278.708.

5.0 Effect on Road, Railways, and Fugitive Dust

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 G 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 7. During construction, the traffic volume will temporarily increase because of the delivery of construction equipment, materials, and workers. While damages to the existing roadway infrastructure are not anticipated, Lost City will seek a road use agreement with Muhlenberg County to outline responsibilities, should damages occur. 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 LOS 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. In the long term, during the operation and maintenance phase, a small maintenance crew will travel to the Project area on a regular basis and as needed to make repairs or for vegetation maintenance (e.g., 1-4 workers, several times a month). It is anticipated that workers will use small to medium trucks. This traffic is considered negligible, and the operation phase of the Project will have no measurable impact on the traffic and/or transportation infrastructure. Based on the analyses performed, no changes to the roadway network are recommended within the study area in order for traffic conditions to operate within acceptable conditions. No active rail line occurs in Muhlenberg County as CSX Transportation formally abandoned its last rail line in the County on September 5, 2000 (65 Fed. Reg. 57651). An abandoned railroad grade located within the Project area measures approximately 1,840 ft and is oriented northwest to southeast and parallels US 431. The proposed Project would have no effect on this abandoned rail line, nor would the Project utilize a railroad for deliveries.

The data and conclusions contained in the Site Assessment Report for the Lost City Solar project regarding the Effect on Road, Railways and Fugitive Dust is in compliance with the intent of KRS 278.708.

5.1 Hiring of a Consultant

The board shall have the authority to hire a consultant to review the site assessment report and provide recommendations concerning the adequacy of the report and proposed mitigation measures.

The board may direct the consultant to prepare a separate site assessment report. Any expenses or fees incurred by the board's hiring of a consultant shall be borne by the applicant.

The board has hired Elliot Engineering and Cloverlake Consulting Services to review the adequacy of the Site Assessment Report.

6.0 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 and represent conditions that Lost City will adhere to for the Project.

1. Prior to construction, a final site layout plan will 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. Final changes in the Project boundaries from the information that formed this evaluation will be submitted to the Siting Board for review.

3. Lost City will provide the date construction activities (excluding activities such as site clearing and geotechnical investigations) will commence to the Siting Board and the Kentucky Energy and Environment Cabinet (KEEC) approximately 30 days prior to that date.

4. Lost City plans to use low voltage Direct Current (DC) wiring, fiber optic cables, and network cables and cables, where appropriate.

5. Lost City will prepare and implement a fire prevention and management plan (see Appendix H for a draft fire management plan) for construction and operation. The Project will include a perimeter firebreak road in the buffer area outside the security fence. Interior access road surfaces and driveways

will be all-weather surfaces capable of supporting travel by a minimum 50,000-pound fire or emergency apparatus and will act also as additional firebreaks.

6. Prior to construction, Lost City, or its contractor will provide a finalized Emergency Response Plan to the local fire district, first responders and any County Emergency Management Agency. Lost City will provide site specific training for local emergency responders at their request. Access for fire and emergency units will be set up after consultation with local authorities.

7. Lost City, or its contractor, will control access to the site during construction or operation. All construction entrances will be gated and locked when not in use.

8. Lost City's access control strategy will include appropriate signage to warn potential trespassers. Lost City will ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.

9. The perimeter security fence will be installed prior to activation of any electrical installation work in accordance with National Electrical Safety Code (NESC) standards. The substation will have itsown separate security fence and locked access installed in accordance with NESC standards.

10. Lost City will prepare a plan outlining how solar panels and related equipment will be installed to minimize the risks associated with strong winds and other inclement weather. This plan will be filed with the Siting Board at least 30 days prior to the start of construction. Lost City Renewables Site Assessment Report.

11. Existing vegetation between site boundary and nearby roadways and homes will be left in place, to the extent feasible, to help minimize visual impacts and screen the Project from nearby homeowners and travelers. Lost City will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.

12. To minimize viewshed impacts and provide screening, Lost City prepared a landscape plan (Appendix E) and will implement planting of native vegetation (e.g., trees and bushes) 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. In these areas, Lost City will add a double planting of native vegetation (40 feet thick and at least six feet at maturity (in four years)). The double planting will be 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/screening will be done over the construction period; however, Lost City will prioritize vegetative planting at all periods of construction to reduce viewshed impacts. All planting will be done prior to the operation of the facility.

13. Lost City will carry out visual screening consistent with the landscape plan 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, Lost City will replace plantings as necessary.

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

15. Lost City will cultivate at least two acres of native, pollinator friendly species on-site and has identified potential pollinator areas in its preliminary design plan (Appendix B).

16. Based on previous experience constructing solar projects, Lost City believes that noise concerns resulting from pile driving activities are most effectively managed through limiting pile driving activities within a certain radius to certain hours during the day to avoid potentially impacting nearby receptors. To this end, Lost City proposes to limit pile driving activities within 1,000 feet of potentially impacted receptors to a reduced period.

17. Construction activities, processes, and deliveries will be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday; construction activities that create a higher level of noise, such as pile-driving, will be limited to 8 AM to 5 PM local time, Monday through Friday. Non-noise causing and non-construction activities can take place on the site between 6 AM and 10 PM. local time, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.

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

19. Lost City will 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 referred to in Item 43 of this Section, at least one month prior to the start of construction.

20. Lost City will place panels, inverters, and substation equipment consistent with the distances to noise receptors to which it has committed in its maps and site plans.

21. Lost City will develop a road use agreement with the Muhlenberg County Road Department (MCRD) and the Muhlenberg County Fiscal Court. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road wight limits, and bridge weight limits. It also might include use of a flag person during heavy commute periods, prioritize access for local residents, and implement staggered work shifts during daylight hours to manage construction traffic flow near the Project site.

22. Lost City will fix or pay for repairs for damage to roads and bridges resulting from any transport to the site according to the road use agreement. For damage resulting from vehicle transport in accordance with all permits, those permits will control.

23. Lost City will comply with all laws and regulations regarding the use of roadways.

24. Lost City will consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

25. Lost City will consult with the MCRD regarding truck and other construction traffic and obtain any necessary permits from the MCRD.

26. Lost City will develop special plans and obtain necessary permits before transporting heavy loads, especially the substation transformer, onto state or county roads.

27. Lost City will develop and implement a traffic management plan to minimize the impact on traffic flow and keep traffic safe. Any such traffic management plan will also identify any traffic-related noise concerns during the construction phase and develop measures that would address those noise concerns.

28. Lost City will implement 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.

29. Lost City will 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 will be kept at a minimal level to be in compliance with 401 KAR 63:010.

30. Lost City will finalize a stormwater pollution prevention plan (SWPPP) prior to construction to manage stormwater and protect water quality (Appendix I).

31. Lost City prepared a geotechnical desktop study (Appendix J), stream and wetland delineation (Appendix K), and a Phase I Environmental Site Assessment (Appendix L) to identify potential groundwater and surface water concerns.

32. Lost City prepared a wildlife concerns analysis to evaluate potential impacts on wildlife (Appendix M).

33. Lost City will improve and maintain access to two private cemeteries that occur on the Project site (Appendix B). The cemeteries are located outside Project security fences.

34. Lost City will design and construct the Project layout to maintain sufficient buffer between solar equipment / security fences with a natural gas pipeline that crosses the Project area (Appendix XX)

layout includes a minimum of 20-feet buffer between the security fence line and solar panels/racking systems. Lost City will coordinate with the natural gas pipeline company on the Project.

35. If any Person as defined by KRS 278.700(3) will acquire or transfer ownership of, or control, or the right to control Lost City, by sale of assets, transfer of stock, or otherwise, or abandon the same, Lost City or its successors or assigns will request explicit approval from the Siting Board with notice of the request provided to the Muhlenberg County Fiscal Court. In any application requesting such abandonment, sale, or change of control, Lost City and any proposed entity with an ownership interest in Lost City will certify its compliance with KRS 278.710(1)(i).

36. Lost City will comply with the decommissioning requirements set forth in KRS 278.706(2)(m) and has prepared a decommissioning plan (Application Attachment H). This plan will commit Lost City to remove all facility components, above ground and below ground, regardless of depth, from the Project site. Upon its completion, this plan will be filed with the Siting Board or its successors. The decommissioning plan will be finalized at least one month before the construction of the Project.

37. Lost City will file a bond with the Muhlenberg County Fiscal Court, equal to the amount necessary to effectuate the explicit or formal decommissioning plan naming Muhlenberg County as a third party obligee (or secondary, in addition to individual landowners and KEEC) beneficiary, in addition to the lessors of the subject property insofar as the leases contain a decommissioning bonding requirement so that Muhlenberg County will have the authority to draw upon the bond to effectuate the decommissioning plan. The acceptance of the county of allowing the filing the bond with an entity other than the Fiscal Court, through the Muhlenberg County Treasurer, can be evidenced by a letter from the Muhlenberg County Judge-Executive, the Muhlenberg County Fiscal Court, or the Muhlenberg County Attorney. The bond(s) will be in place at the time of commencement of Project construction. The bond amount will be reviewed every five years at Lost City's expense to determine and update the cost of removal amount. This review will 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 will be provided to the Siting Board or its successors and the Muhlenberg County Fiscal Court. Such certificate shall be by letter and will include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

38. The bond or other similar security will be provided by an insurance company or surety that shall at all times maintain at least an “Excellent” rating as measured by the AM Best rating agency or an investment grade credit rating by any national credit rating agency and, if available, shall be noncancelable by the provider or the customer until completion of the decommissioning plan or until a replacement bond is secured.

39. The bond or other similar security will provide that at least thirty (30) days prior to its cancellation or lapse, the surety will notify the applicant, its successor or assign, each landowner, the KEEC, and panels/racking systems. Lost City will coordinate with the natural gas pipeline company on the Project.

35. If any Person as defined by KRS 278.700(3) will acquire or transfer ownership of, or control, or the right to control Lost City, by sale of assets, transfer of stock, or otherwise, or abandon the same, Lost City or its successors or assigns will request explicit approval from the Siting Board with notice of the request provided to the Muhlenberg County Fiscal Court. In any application requesting such abandonment, sale, or change of control, Lost City and any proposed entity with an ownership interest in Lost City will certify its compliance with KRS 278.710(1)(i).

40. Lost City will comply with the decommissioning requirements set forth in KRS 278.706(2)(m) and has prepared a decommissioning plan (Application Attachment H). This plan will commit Lost City to remove all facility components, above ground and below ground, regardless of depth, from the Project site. Upon its completion, this plan will be filed with the Siting Board or its successors. The decommissioning plan will be finalized at least one month before the construction of the Project.

41. Lost City will file a bond with the Muhlenberg County Fiscal Court, equal to the amount necessary to effectuate the explicit or formal decommissioning plan naming Muhlenberg County as a thirdparty obligee (or secondary, in addition to individual landowners and KEEC) beneficiary, in addition to the lessors of the subject property insofar as the leases contain a decommissioning bonding requirement so that Muhlenberg County will have the authority to draw upon the bond to effectuate the decommissioning plan. The acceptance of the county of allowing the filing the bond with an entity other than the Fiscal Court, through the Muhlenberg County Treasurer, can be evidenced by a letter from the Muhlenberg County Judge-Executive, the Muhlenberg County Fiscal Court, or the Muhlenberg County Attorney. The bond(s) will be in place at the time of commencement of Project construction. The bond amount will be reviewed every five years at Lost City's expense to determine and update the cost of removal amount. This review will 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 will be provided to the Siting Board or its successors and the Muhlenberg County Fiscal Court. Such certificate shall be by letter and will include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

42. The bond or other similar security will be provided by an insurance company or surety that shall at all times maintain at least an “Excellent” rating as measured by the AM Best rating agency or an investment grade credit rating by any national credit rating agency and, if available, shall be noncancelable by the provider or the customer until completion of the decommissioning plan or until a replacement bond is secured.

43. The bond or other similar security will provide that at least thirty (30) days prior to its cancellation or lapse, the surety will notify the applicant, its successor or assign, each landowner, the KEEC, and requirements specified in the lease with the landowner may, in the sole discretion of the applicant or its successor or assign, be accommodated.

44. As applicable to individual lease agreements, Lost City, 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.

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

46. Any disposal or recycling of Project equipment, during operations or decommissioning, will be done in accordance with applicable laws and regulations.

47. Due to the interconnection of the solar facility to an existing TVA substation and transmission line, the Project is subject to National Environmental Policy Act (NEPA) review. In the case of solar power purchase agreements, TVA requires development of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) to document the review and the associated public involvement, such as comment period(s) and public meetings, if applicable. TVA's obligation to purchase renewable power will be contingent upon the satisfactory completion of the appropriate environmental review (an EA or EIS) and TVA's determination that the Proposed Action would be "environmentally acceptable." To be deemed acceptable, TVA must assess the impact of the Project on the human environment to determine whether (1) any significant impacts would result from the location, operation, and/or maintenance of the proposed Project and/or associated facilities, and (2) the Project would be consistent with the purposes, provisions, and requirements of applicable federal, state, and local environmental laws and regulations. The EA or EIS will also list the unavoidable adverse environmental impacts and associated BMPs and mitigation measures that will be employed by the Project. These commitments will appear in the publicly available Finding of No Significant Impact or Record of Decision document anticipated to be issued by TVA with finalization of the EA or EIS. Lost City will provide the Siting Board with the NEPA documentation.

48. Lost City will initiate and maintain a Complaint Resolution Program provided to the Siting Board to address any complaints from community members. Lost City will also submit annually a status report associated with its Complaint Resolution Program, providing, among other things, the individual complaints, how Lost City addressed those complaints, and the ultimate resolution of those complaints identifying whether the resolution was to the complainant's satisfaction. Lost City will submit a final report within 30 days after commencement of electric generation.

49. Lost City will provide the Muhlenberg County Fiscal Court contact information for individuals within the company that can be contacted with concerns. This will include contact information for the general

public to reach individuals that can address their concerns. Lost City will update this contact information yearly, or within 30 days of any change in contact information.

50. Lost City will comply with all requirements in KRS 278.710 for monitoring by KEEC. 48. Lost City will submit a status report every six months until the Project commences construction to the Siting Board to update the Siting Board on the progress of the Project. The report will reference the Project case number. 49. Within 30 days of entry, Lost City will send a copy of the Siting Board's final order to all the adjoining landowners who previously were required to receive notice of this Project.

The data and conclusions contained in the Site Assessment Report for the Lost City Solar project regarding Mitigation Measures is in compliance with the intent of KRS 278.708(4).

6.0 Additional Mitigation Measures Recommended by the Consultant (Cloverlake Consultanting Services)

The applicant has done a excellent job of assessing the impact of the proposed project. The only suggested mitigation measure is to carefully monitor the construction process during excavation and pile driving to ensure that undiscovered family cemeteries are not disturbed.

7.0 New Electric Transmission Line Associated With the Lost City Solar Project

The alignment for the new transmission project associated with the Lost City Solar Project is shown on a map in the appendices of this report.

8.0 Summary of the Adequacy of the Applicants Site Assessment Report

The applicant has done an excellent job of assessing the impact of the proposed project in the Site Assessment Report. Among the issues that were addressed are Environmental Permitting, Wetland Delineations, Stormwater, Groundwater, and Endangered Species.

9.0 Cumulative Environmental Assessment and Additional Studies

Lost City Solar engaged Copperhead Environmental Consulting to complete the Cumulative Environmental Assessment for the Lost City Solar Project. The quality of the report is excellent and more than adequate to meet the requirement of Kentucky laws and regulations.

In addition other studies were conducted:

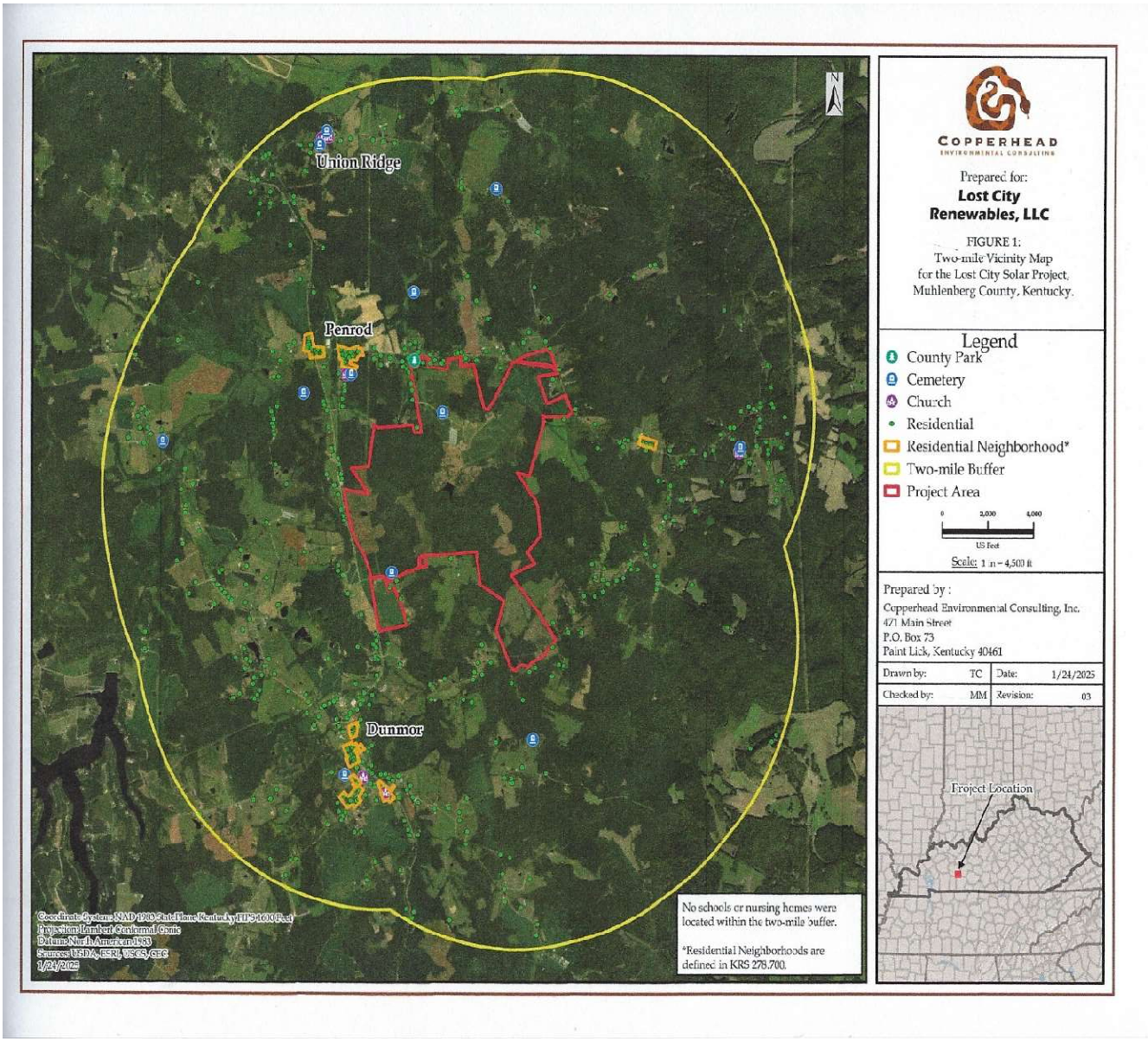
- Stream and Wetland Delineation
- Archaeological Resources
- Cultural Resources
- Raptor Survey
- Bat Survey
- Endangered Species/Habitat Assessment

Based on a review of The Lost City Solar Project Site Assessment Report, as well as the Applicant's responses to the first and second sets of Inquiries from the Staff, by W. Thomas Chaney of Cloverlake Consulting Services, all the sections of the report are in compliance with the intent of KRS 278.708.

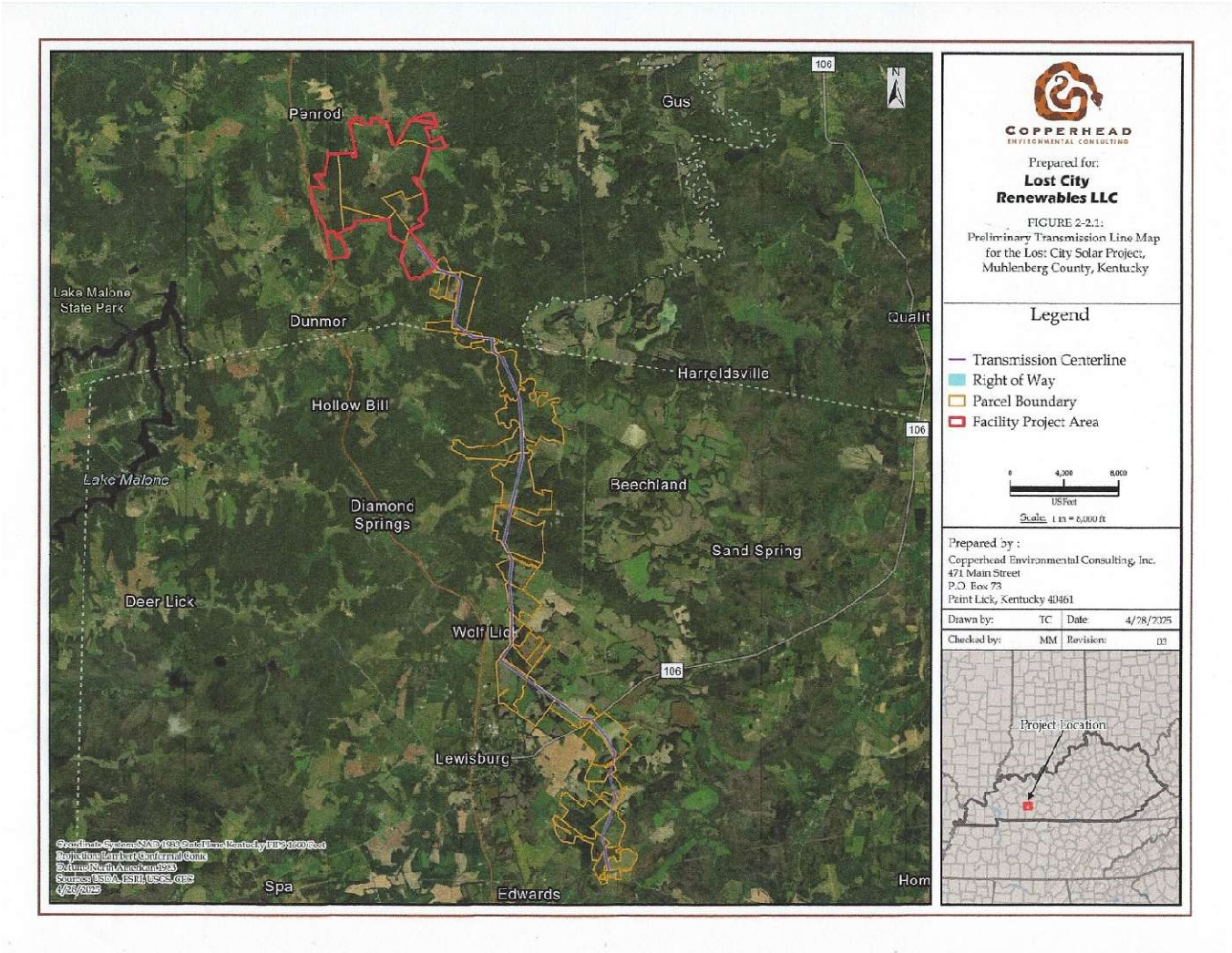
REFERENCES

All the information for this Adequacy Assessment was extracted from the Applicant's Site Assessment Report ,the Applicant's Electric Transmission Line Application, Weirs Creek Solar Project, supplemental reports, appendices, legal filings and a field analysis performed on August 14 and 15, 2024 by W. T. Chaney of Cloverlake Consulting Services.

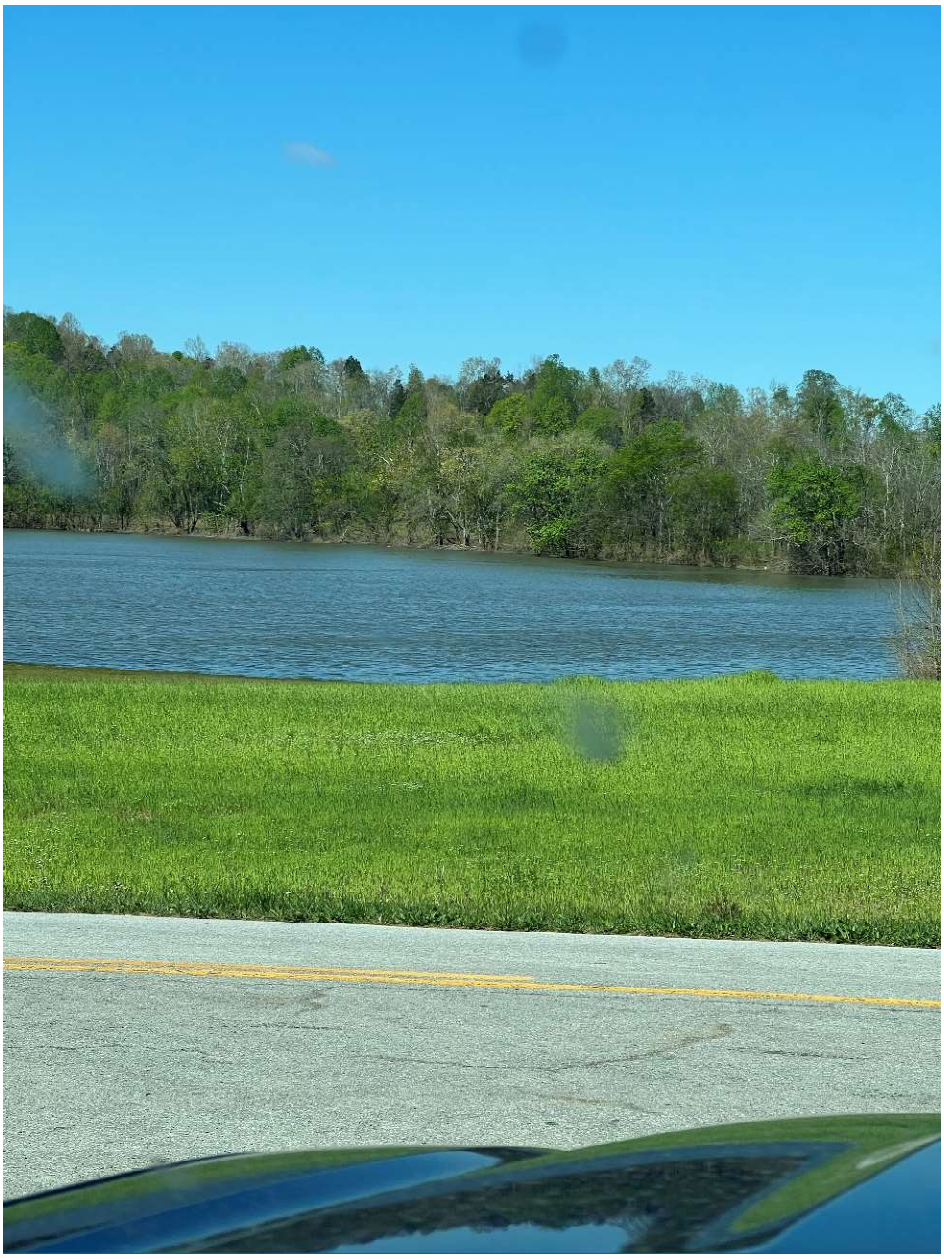
Context Map

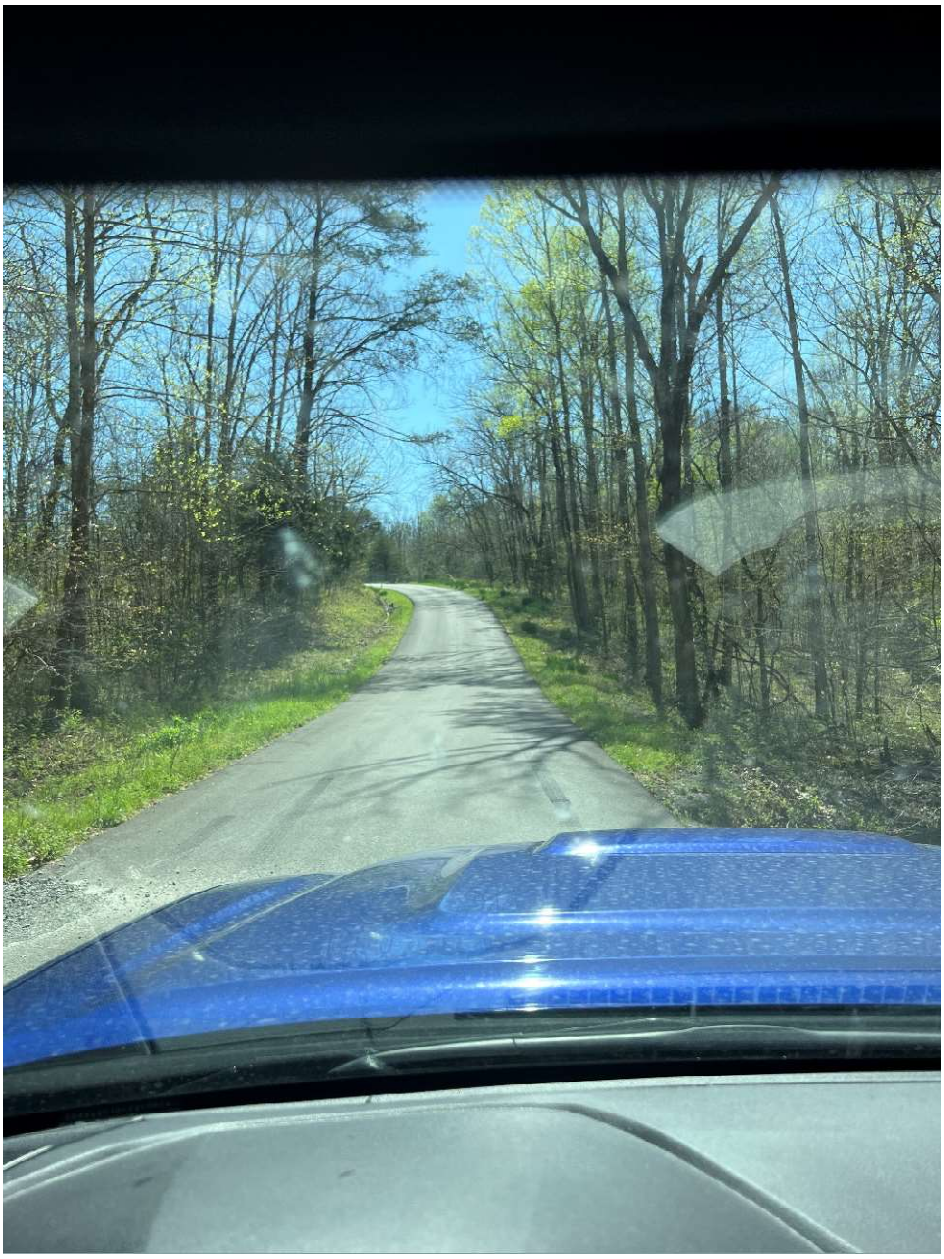

Union Ridge
Penrod
Dunmor
N
COPPERHEAD
ENVIRONMENTAL CONSULTING
Prepared for:
Lost City Renewables, LLC
FIGURE 1:
Two-mile Vicinity Map
for the Lost City Solar Project,
Muhlenberg County, Kentucky.
Legend
County Park
Cemetery
Church
Residential
Residential Neighborhood*
Two-mile Buffer
Project Area
0
2,000
4,000
US Feet
Scale: 1 in = 4,500 ft
Prepared by :
Copperhead Environmental Consulting, Inc.
471 Main Street
P.O. Box 73
Paint Lick, Kentucky 40461
Drawn by: TC
Date: 1/24/2025
Checked by: MM
Revision: 03
Project Location
Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 (Feet)
Projection: Lambert Conformal Conic
Datum: North American 1983
Sources: USDA, ESRI, USGS, GEC
1/24/2025
No schools or nursing homes were located within the two-mile buffer.
*Residential Neighborhoods are defined in KRS 278.700.

Proposed Electric Transmission Line Map



Gallery of Photographs Taken During The Site Visit by W. T. Chaney on April 15, 2025






Dunmor Substation


DOLLAR GENERAL

Resume W. Thomas Chaney

RESUME

W. THOMAS (TOM) CHANEY

PRESIDENT CLOVERLAKE CONSULTING

YEARS OF EXPERIENCE

52

EDUCATION

- MBA, Finance and Management Point Park University, 2011
- M.A., Environmental Planning, Eastern Kentucky University, 1973
- B.A., Physical Geography and Geology, Eastern Kentucky University, 1972

AREAS OF EXPERTISE

- Strategic training and mentoring of employees
- Management and direction of multidiscipline natural resource management consulting teams
- Environmental Assessment of Energy Facilities including Wind and Solar Projects
- Harvard Leadership Development Training
- Advanced Project Management Training

CERTIFICATIONS

- Certified Mediator, 2004
- Certified Kepner-Tregoe Rational Process Program Leader, 2003
- Harvard Leadership Development
- Advanced Project Management

HONORS

- Cinergy "Above and Beyond Award" for Diversity, CG&E/Cinergy, Duke Energy
- Diversity Champion and "Wolf" Award recipient for top individual performance, CG&E/Cinergy, Duke Energy

EXPERIENCE SUMMARY

Mr. Chaney is the President of Cloverlake Consulting Services and directs the work of expert natural resource management teams of engineers and scientists. He has a distinguished background in utility management, organizational development and consultant service to utility companies for environmental and planning work. He has done career management service for large utilities including Cinergy, Cincinnati Gas & Electric and Duke, and has consulting experience with Power Engineers, BHE Environmental, GAI Consultants, Booz-Allen Hamilton, Woolpert Consultants, and Dames and Moore.

Mr. Chaney's current practice involves Siting and Environmental Planning for major utility facilities in several states in the Midwest. He has developed testimony and testified in front of state siting agencies.

He also specializes in strategically training and mentoring employees and has grown a prominent Cincinnati multi-discipline environmental engineering and consulting practice. He also provided strategic training and mentoring services for CG&E, Cinergy, and Duke Energy for 25 years and currently provides these services to Master Provisions, a Northern Kentucky food charity... Mr. Chaney developed and presented the Business Case for Diversity to Cinergy executives in 1995, and was responsible for environmental training and education, and high-performance team training and coaching.

He is a certified mediator and holds a license as a Program Leader for Kepner-Tregoe rational process.

Kentucky Public Service Commission-Siting Board Ohio Power Siting Board SITING AND CERTIFICATION

Another specialty is the management of the Ohio Power Siting Board siting/certification process. He is also proficient at managing the Kentucky PSC Siting Board Process. He was involved in the original development of the rules for these processes with the PUCO and the OPSB and served as the implementing Principal contact for CG&E, Cinergy, and Duke from 1984 to 2006. He has been involved in consulting practices since then that specialize in these siting processes including GAI Consultants, BHE consultants, Power Engineers and ERM.

The following projects are a few examples of this work:

- Kentucky Public Service Commission Siting Board

In his position as President of Cloverlake Consulting Services, he has completed the analysis of the adequacy of sixteen solar projects in Kentucky.

- AEP Siting and Permitting Projects, Ohio, Kentucky, Indiana, Virginia and West Virginia

In his position with Power Engineers, he supervised over twenty siting and permitting projects in the above states.

- NIPSCO Permitting In Indiana

Mr. Chaney, likewise, was involved in several Transmission Line permitting projects in Indiana for NIPSCO.

- GAI Consultants, Constance-Zimmer Natural Gas Transmission Line, Ohio

Project Manager responsible for the siting, routing and certification of this transmission line. The project required numerous environmental permits and a Certificate of Environmental Compatibility and Public need from the Ohio Power Siting Board (OPSB).

- Dominion East Ohio Gas, Akron-Canton Gas Transmission Line, Ohio

Project manager responsible for siting, certification (OPSB) and permitting.

- Management Consulting, Large Aviation and Environmental Projects

As a management consultant for a private management consulting firm, Mr. Chaney was responsible for numerous large aviation and environmental projects, including the Chicago, O'Hare International Airport Delta Concourse project, the Miami International Airport Runway Environmental Impact Statement (EIS) Concourse project, the Miami International Airport Runway Environmental Impact Statement (EIS)project, and the Greater Pittsburgh International Airport Midfield Terminal Studies project that required noise and land use compatibility studies.

- Regional Planning manager

As a planning manager for the Northern Kentucky Area Development District, Mr. Chaney covered all aspects of regional planning for eight counties in northern Kentucky. He supervised professional and clerical staff dealing with issues on the environment, housing, land use and recreation in compliance with the Older Americans Act (Title III) and the Social Security Act (Titles XIX and XX).

- Senior Environmental Planning Consultant

Mr. Chaney's experience as a Senior Environmental Planner with a private consulting firm required management of numerous land use planning and environmental assessment projects. His duties included accountability to the client.

- Duke Energy, Edwardsport IGCC Start-Up natural Gas Line, Indiana

Project Manager for the routing and permitting of a gas transmission line used to start-up the Edwardsport Indiana IGCC. This project is a clean coal endeavor that utilizes Illinois Basin high sulfur coal.

- Dominion East Ohio Gas Company, Solid Waste natural Gas Siting Study and Application, Ohio

Project Manager for the OPSB application for this complex project, which was rerouted due to the construction of a large municipal landfill.

- GAI Consultants, Rockies Express Line, Ohio

Project Manager for cultural resources projects associated with this gas transmission line.

- CG&E, Gas Storage Site, Kentucky

Project Manager responsible for the environmental permitting of this large gas storage site, formerly a depleted gas and oil production field.

- CG&E/Cinergy/Duke Energy Natural Gas Licensing Projects, Multiple States

Reviewed and led the licensing and environmental permitting for all natural gas transmission line projects.

- CG&E Cinergy, Numerous Power Plant, Transmission Line and Gas Line Siting and permitting Projects

In his capacity as Licensing Division Director, Mr. Chaney was involved in more than 100 Transmission Line, Gas Line and Power Plant projects during his tenure with CG&E/Cinergy/Duke.