

Tab 5
Setback Requirements

TAB 5 SETBACK REQUIREMENTS

KRS 278.706(2)(e) If the facility is not proposed to be located on a site of a former coal processing plant and the facility will use on-site waste coal as a fuel source or in an area where a planning and zoning commission has established a setback requirement pursuant to KRS 278.704(3), a statement that the exhaust stack of the proposed facility and any wind turbine is at least one thousand (1,000) feet from the property boundary of any adjoining property owner and all proposed structures or facilities used for generation of electricity are two thousand (2,000) feet from any residential neighborhood, school, hospital, or nursing home facility, unless facilities capable of generating ten megawatts (10MW) or more currently exist on the site. If the facility is proposed to be located on a site of a former coal processing plant and the facility will use on-site waste coal as a fuel source, a statement that the proposed site is compatible with the setback requirements provided under KRS 278.704(5). If the facility is proposed to be located in a jurisdiction that has established setback requirements pursuant to KRS 278.704(3), a statement that the proposed site is in compliance with those established setback requirements.

The Facility is not proposed to be located on the site of a former coal processing plant; rather, it will be located on the site of a former coal surface mine which has been reclaimed. Additionally, the Facility will generate electricity by the direct conversion of sunlight into electrical energy; therefore, no on-site waste coal will be used as a fuel source for the Facility and there will be no exhaust stack associated with the Facility. Further, there will be no wind turbines included as part of the Facility.

Martin County has no established setback requirements pursuant to KRS 278.704(3). Therefore, the setback requirements pursuant to KRS 278.704(2) for Project components shall be required to be at least two thousand (2,000) feet from a residential neighborhood, school, hospital, or nursing home facility is applicable to this Project. Pursuant to KRS 278.704(4), a motion to deviate from the setback requirements of KRS 278.706(2)(e) is forthcoming.

The Applicant submits that a 2,000 setback requirement is not necessary for the Facility because, with a reduced setback, the Facility will still meet the goals of KRS 224.10-280, 278.010, 278.212, 278.214, 278.216, 278.218, and 278.700 to 278.716. The Cumulative Environmental Assessment, prepared pursuant to KRS 224.10-280 and submitted as part of this application (Attachment H), establishes that impacts to the surrounding community

associated with air pollutants, water pollutants, waste products, and water withdrawals related to the construction and operation of the Facility will be minimal.

As established in this application, prepared pursuant to KRS 278.706, local adverse impacts associated with the construction and operation will be minimal. Economic impacts on the local and regional economies will be positive. As detailed in the Site Assessment Report, provided pursuant to KRS 278.708 (Tab 12), the proposed Project is compatible with surrounding land uses. Because of its location, the Project Site will have minimal visual impact on the surroundings. The Project is not anticipated to have a negative impact on property values and land use (Tab 12, at Exhibit G). According to the Acoustic Assessment included with the Site Assessment Report (Tab 12, at Exhibit D), noise levels associated with operation of the Project will be compatible with the existing neighborhoods.

Attachments:

- Attachment H: Cumulative Environmental Assessment (7 pages)



Attachment H Cumulative Environmental Assessment

Cumulative Environmental Assessment

Lynn Bark

PREPARED FOR
Lynn Bark Energy Center, LLC

DATE
10 May 2024



1. INTRODUCTION

The purpose of this report is to satisfy the requirements of the Kentucky Revised Statutes (KRS) 224.10-280 which states no person shall commence to construct a facility to be used for the generation of electricity unless that person submits a cumulative environmental assessment (CEA) to the Kentucky Energy and Environment Cabinet (EEC) with the permit application. Lynn Bark Energy Center, LLC (Lynn Bark) has prepared this report to satisfy the requirements of KRS 224.10-280 as part of their application for the Lynn Bark (Project Site). The Project Site is situated on approximately 1,514 acres of a reclaimed coal mine with forested portions in the western-central portion of Martin County, Kentucky with stream corridors dissecting the area (GPS Centroid 37.793175° N, -82.547436° W; Project Site) The Project Site is proposed to consist of a solar photovoltaic facility with a generation capacity of up to 200 megawatts (MW) of electricity.

Lynn Bark is unaware of any regulations that have been promulgated regarding CEAs. To comply with KRS 224.10-280, this CEA will evaluate potential project impacts to four areas: air pollutants, water pollutants, wastes, and water withdrawal.

2. AIR POLLUTANTS

The emission of air pollutants is regulated through the 1970 Clean Air Act, which through its regulations has established baseline National Ambient Air Quality Standards (NAAQS) for multiple pollutants in order to protect public health and welfare. The pollutants covered are ozone, particulate matter (PM), carbon monoxide (CO), nitrous oxides (NOx), sulfur dioxide (SO₂), and lead.

Geographic areas with ambient concentrations of these pollutants that exceed the NAAQS are designated as areas of nonattainment, and new emissions sources in or near these areas are often subjected to more stringent permitting requirements.

Martin County and the surrounding counties (Lawrence, Johnson, Floyd, and Pike) are in attainment for all pollutants (USEPA 2024).

Increases in air pollutant emissions would occur during development and construction of the Project Site; however, these increases would be temporary in nature. Air pollutant emissions would result from operation and staging of supplies and construction equipment, worker personnel vehicles, and equipment and supply deliveries. The amount of increase in air pollutant emissions would vary by the construction activity, workforce size, and weather conditions occurring on the site. It is estimated that the Project will provide approximately 573 new jobs to Martin County and 480 workers would be onsite at any one time during the up to 12 to 18-month construction period. When possible, work will be conducted during daylight hours, but at times it may be necessary to continue work after dark to complete critical construction activities. No nighttime pile driving will be conducted, with pile driving scheduled to only occur between the hours of 8 a.m. and 8 p.m. or from dawn to dusk whichever is earlier. Construction and operation equipment would include, but not be limited to, bulldozers, backhoes, flatbed semi-trucks, forklifts, bobcats and/or specialized tractors with extender or drill with auger or pile driver for installation of solar panel array posts, and concrete trucks.



Local emissions of PM, NO_x, CO, volatile organic compounds (VOCs), and SO₂ would be generated by both gasoline and diesel combustion engines. These emissions are anticipated to result in temporary minor air quality impacts due to the limited durations, numbers of vehicles, and hours of operation. No burning of wood debris will occur on the Project Site, and trees that are felled will be managed at an offsite facility or will be chipped or mulched on Project Site.

Activities related to construction at the site will result in temporary increases in air pollutant emissions (e.g., dust and other suspended particles). Dust increases will be a result of any grading and vehicle travel on unpaved roads. To reduce impacts to air quality, the Project Site will require contractors to implement best management practices (BMPs) which may include activities such as wetting areas to reduce dust and covering loads to minimize dust emissions. Overall, impacts on air quality will be minor due to being localized and temporary in nature.

Solar facilities do not produce any emissions during operation, as such, the Project Site is not anticipated to emit any of the criteria pollutants (PM, CO, SO₂, NO_x, VOCs, or lead). In addition, no hazardous air pollutants are expected to be emitted from the Project Sited during operation.

Solar facility equipment such as Photovoltaic Combining Switchgear (PVCS) can contain sulfur hexafluoride (SF₆) that is a greenhouse gas. Releases of this gas is not anticipated during operation of the Project Site and Lynn Bark would report to the United States Environmental Protection Agency (USEPA) regarding greenhouse gas if required under the USEPA's Mandatory Reporting of Greenhouse Gases Final Rule.

During operation the only anticipated emissions associated with the Project Site are those from maintenance vehicles, such as trucks used by technicians and equipment used during mowing and other vegetation control. Lynn Bark anticipates daily visits by personnel to conduct inspections, perform equipment maintenance, and vegetation management.

3. WATER QUALITY

3.1 SURFACE WATER

The Project Site is in the Eastern Kentucky Coal Field physiographic region, located within the Upper Rockcastle Creek sub watershed (Hydrologic Unit Code [HUC] 050702010605) and the Coldwater Fork sub watershed (HUC 050702010603). The Project Site is drained by the Venters Branch, Jones Branch, and Mullet Branch, and their unnamed tributaries. The waterbodies within the northern portion of the Project Site ultimately drain to Rockcastle Creek, while the southern portion drains into Coldwater Fork (USGS, 2024). The Project Site consists mainly of reclaimed mine with portions consisting of forested land. As such, the majority of vegetation consists of grazing/forage species, and natural hydrology is expected to be significantly altered. After aerial image data analysis, no waterways are present within the Project Site boundary that would require a special use or cold-water habitat designation. (e.g., Outstanding State Resource Waters, Coldwater Aquatic Habitats, or other Special Use Waters) from the Kentucky Division of Water (KDOW) (KDOW, 2024).

Construction activities may increase erosion and sedimentation, which may impact onsite streams and wetlands. To minimize impacts, the Project Site will utilize the existing landscape where possible to eliminate grading. Where grading is unavoidable, the process will be completed with

earthmoving machinery and will make every effort to match existing slopes. Lynn Bark expects the Project Site to have storm water discharge during construction and intends to comply with KDOW's Construction Storm Water Discharge General Permit (Permit Number KYR10) for any construction activities that disturb an acre or more. A Notice of Intent will be submitted before any work begins on the site; Lynn Bark will submit a Notice of Termination once work is complete.

Contractors will be required to use silt fences, temporary sediment basins and traps, buffers and other Best Management Practices (BMPs) around streams, wetlands, and open waters, in order to minimize the impacts of stormwater runoff. Lynn Bark or its contractor will prepare and implement a stormwater pollution prevention plan (SWPPP) to comply with KDOW requirements. These BMPs will be used during the construction phase through final vegetative stabilization to minimize sediment runoff into Waters of the U.S. and Commonwealth.

After construction, all disturbed areas not occupied by Project Site infrastructure will be returned to approximate pre-construction use and capability via reclamation and revegetation. Disturbed soils inside of the Project Site's fence line will be re-seeded to stabilize exposed soil and control sedimentation. All plantings and other erosion control measures will be inspected and maintained until the Project Site is stable.

If necessary, selective spraying of invasive and nuisance species would be utilized for vegetation control on the site. Any herbicides used will be applied by state licensed commercial pesticide applicators, in accordance with label directions and will limit any applications near waters of the U.S. or Commonwealth, reducing the risk of unacceptable aquatic impacts.

A small portion of the Project Site will be used as temporary construction mobilization and laydown area, which will contain the office trailer, worker parking, equipment and material staging or storage, above ground water and fuel tanks, and assembly areas for the duration of construction activities. Where possible, the laydown yard will be placed in an area where the proposed solar array will be located. Once construction is complete, all office trailers, equipment, unused materials, and any debris will be removed from the Project Site.

Once construction is complete, operation of the Project Site will have little to no impact on surface water. BMPs will be utilized during any maintenance activities that may cause runoff of any sediments or pollutants.

3.2 GROUNDWATER

Groundwater is any water found under the earth's surface, including geologic formations which contain sufficient saturated permeable material to produce large quantities of water to wells and springs known as aquifers (USGS 1995). Aquifers are often used as sources of drinking water and irrigation. Any adverse impacts to groundwater could have significant social and economic impacts.

Development of the Project Site is not anticipated to have any negative impacts to groundwater. Rainwater would run off the panels and either be absorbed into the ground and enter the aquifer or be collected by nearby surface water features.

Hazardous materials in the form of fuels, lubricants and other fluids will be stored on site during construction. Contractors will utilize BMPs to minimize the risk of leaks and spills and implement

plans and procedures to immediately address spills and leaks that may occur. These efforts will limit the risk of potential impacts to groundwater. Due to the use of BMPs, there are no anticipated direct adverse impacts due to construction of the Project Site's on groundwater.

During construction and operation, it is possible that limited use of fertilizer and herbicides will be used at the Project Site. Any chemical use will be conducted in accordance with manufacturer's recommendations.

4. WASTE

All waste generated during the construction and operation of the Project Site will be disposed of following all local, state and federal regulations.

Waste generated during construction activities will include wooden crates, pallets, cardboard boxes and other packaging material. Additionally, excess wiring and other random debris could be intermittently produced. Where practical, construction waste material will be recycled and any material that cannot be recycled will be disposed of offsite at a permitted facility. Construction contractors and subcontractors will be responsible for proper cleanup, disposal, and storage activities.

Primary construction materials stored on site will be liquids such as used oil, diesel fuel, gasoline, hydraulic fluid, and other lubricants. Proper disposal containers, obtained by a waste disposal contractor, will be located at onsite staging areas. Waste materials generated during the construction process will be stored in appropriate containers specific to the waste material. The storage containers will have secondary containment in case of tank or vessel failure. Safety data sheets will be available to on-site personnel for all applicable materials.

Fueling of some petroleum fueled construction related machinery, such as tractors, trucks, and semi-trucks will take place on the Project Site. Other vehicles will be refueled at on-site laydown areas. Proper storage and handling procedures for preventing spills related to machinery refueling will be implemented by the construction contractor. Additionally, spill control kits will be carried on refueling vehicles.

Paint, degreasers, pesticides, herbicides, air conditioning fluids (chlorofluorocarbons [CFC]), gasoline, propane, hydraulic fluid, welding rods, lead acid batteries, and janitorial supplies may be stored on site in small quantities. Significant environmental impacts caused by a potential spill are not anticipated due to the small quantity of materials and the implementation of proper clean up procedures. Solar facility equipment such as transformers contain dielectric oil and used oil would be produced during maintenance of transformers.

Lynn Bark will develop and implement a Spill Prevention Control and Countermeasure (SPPCC) Plan for the Project Site to protect surface and ground water contamination. The plan will be kept onsite for the Project Site staff to review and follow.

Proper personal protective equipment (PPE) will be provided to Project Site staff, and they will be trained in proper use of PPE and the handling, use, and cleanup procedures of hazardous materials used on site. Adequate supplies of applicable clean up materials will be stored onsite.

Designated waste management companies will manage any waste generated on site. Waste produced on the Project Site is expected to be minimal and will be mainly related to maintenance or repair of construction equipment.

Additionally, portable toilets will be placed on the Project Site for construction workers. Licensed contractors will be responsible for pumping sewage from the portable toilets. The sewage waste will be disposed of at a permitted location selected by the toilet contractor.

Once construction is complete and the Project Site is in the operation phase, no waste is expected to be generated from the Project Site outside of maintenance activities. Any waste generated during maintenance activities will be removed from the Project Site and disposed of in accordance with state and federal regulations.

Based on review of the potential waste generation activities, adverse effects are not anticipated from general waste or wastewater treatment and disposal.

5. WATER WITHDRAWAL

Water for construction-related dust control and operations will be obtained from several potential sources, such as water trucked in from an offsite water purveyor.

Water use related to construction activities will include Project Site preparation such as dust control and grading activities. The primary use of water would be for the grading of access roads, foundations, and equipment pads. Proper BMPs outlined in the SWPPP will be followed during equipment washing and potential dust control discharges. Groundwater resources are not anticipated to be adversely affected by the volume of water required during the construction process.

Solar electricity operation is not a water-intensive process. Manual washing of solar panels is not anticipated. Rainfall in the region will suffice to remove dust and other debris from the PV panels.

However, water will be used for vegetation management needs, including screening vegetation installation and during prolonged periods of drought.

6. REFERENCES

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