CRAB RUN
SOLAR PROJECT

Tab 5

Setback Requirements

TAB 5 – SETBACK REQUIREMENTS

Requirement: ***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 Project is not proposed to be located on the site of a former coal processing plant; rather, it will be located on land that is or was used for agriculture. Additionally, the Project 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 Project, and there will be no exhaust stack associated with the Project. Further, there will be no wind turbines included as part of the Project.

As there are no local zoning requirements, the setbacks pursuant to KRS 278.704(2) for Project components of 2,000 feet from a residential neighborhood, school, hospital, or nursing home facility are applicable. Pursuant to KRS 278.704(4), a motion to deviate from the setback requirements of KRS 278.706(2)(e) is forthcoming.

The Applicant will request a deviation from the 2,000-foot setbacks because, with a reduced setback, the Project 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

(CEA), prepared pursuant to KRS 224.10-280 and included as Attachment C, 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 Project 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 SAR, provided pursuant to KRS 278.708, the Project is compatible with surrounding land uses. Because of its location, the Project will have minimal adverse visual impact on the surroundings. The Project is not anticipated to have a negative impact on property values and land use. Noise levels associated with operation of the Project will be minimal and compatible with the existing neighborhoods.

Attachment:

- Attachment C: Cumulative Environmental Assessment (8 pages)

CRAB RUN
SOLAR PROJECT

Attachment C
Cumulative Environmental Assessment

Cumulative Environmental Assessment

Crab Run Solar Project

PREPARED FOR
Crab Run Solar Project, LLC

DATE
11 November 2025

REFERENCE
0787671

1. INTRODUCTION

The purpose of this report is to satisfy the requirements of the Kentucky Revised Statutes (KRS) 224.10-280, which state 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 with its application for a construction certificate. Crab Run Solar Project, LLC (Crab Run Solar) has prepared this report to satisfy the requirements of KRS 224.10-280 as part of its Application for the Crab Run Solar Project (Project). The Project is situated on approximately 412 acres of predominately agricultural land with minimal forested areas on the site, mainly along the stream corridors that dissect the area (GPS Centroid 37.608216° N, -85.366593° W; Project Area). The Project Area is 1.80 miles southeast of the town of Loretto, in central Marion County, Kentucky. The Project is proposed to consist of a solar photovoltaic (PV) facility with a generation capacity of up to 45 megawatts (MW) of electricity.

Crab Run Solar 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, waste, 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 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. Marion County and the surrounding counties (Nelson, Washington, Boyle, Casey, Taylor, and Larue) are in attainment for all pollutants (USEPA 2025).

Increases in air pollutant emissions would occur during development and construction of the Project; 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, work force size, and weather conditions occurring in the Project Area. It is estimated that up to 95 workers would be on-site at any one time during the up-to-8-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. 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, NOx, 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. It is anticipated that trees that are felled will be managed at an off-site facility or will be chipped or mulched at the Project Area. It is possible that trees may be burned on-site depending upon the season; however, the Project would adhere to applicable air quality and safety standards.

Activities related to construction in the Project Area 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 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 is not anticipated to emit any of the criteria pollutants (PM, CO, SO2, NOx, VOCs, or lead). In addition, no hazardous air pollutants are expected to be emitted from the Project during operation.

Solar facility equipment such as Photovoltaic Combining Switchgear (PVCS) can contain sulfur hexafluoride (SF_6), which is a greenhouse gas. Releases of this gas are not anticipated during operation of the Project, and Crab Run Solar 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 are those from maintenance vehicles, such as trucks used by technicians and equipment used during mowing and other vegetation control. Crab Run Solar anticipates daily visits by personnel to conduct inspections, perform equipment maintenance, and vegetation management.

3. WATER QUALITY

3.1 SURFACE WATER

The Project lies in the Outer Bluegrass physiographic region (Woods et al. 2002) and is primarily located within the Hardins Creek sub watershed (Hydrologic Unit Code [HUC] 051401030303) with a small portion (approximately 4.4 acres) within the Prather Creek-Rolling Fork sub watershed (HUC 051401030502). The Project Area is drained by the Crab Run and unnamed tributaries. The waterbodies within the northern portion of the Project Area ultimately drain to Crab Run Creek, (USGS, 2025). The Project Area consists mainly of agricultural use with portions consisting of forested land. As such, the majority of vegetation consists of grazing/forage species, and natural hydrology is expected to be historically altered. After aerial image data analysis, no waterways are present withing the Project Area 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 2025).

Construction activities may increase erosion and sedimentation, which may impact on-site streams and wetlands. To minimize impacts, the Project 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. The Project anticipates stormwater

discharge during construction and intends to comply with KDOW's Construction Stormwater Discharge General Permit (Permit Number KYR10) for any construction activities that disturb one acre or more. A Notice of Intent (NOI) will be submitted electronically before any work begins on-site, and the Project will submit an electronic Notice of Termination (NOT) once work is complete.

Contractors will be required to use silt fences, temporary sediment basins and traps, buffers and other BMPs around streams, wetlands, and open waters, to minimize the impacts of stormwater runoff. Crab Run Solar 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 infrastructure will be returned to an approximate pre-construction use and capability via reclamation and revegetation. Disturbed soils inside of the Project'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 Area is stable according to the conditions of the SWPPP.

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

A small portion of the Project Area 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 Area.

Once construction is complete, operation of the Project 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 that contain sufficient saturated permeable material to produce large quantities of water to wells and springs known as aquifers (USGS, 2018). 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 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 on groundwater.

During construction and operation, it is possible that limited use of fertilizer and herbicides will be used in the Project Area. 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 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 materials. Additionally, excess wiring and other random debris could be intermittently produced. No waste will be disposed of in the Project Area. Where practical, construction waste material will be recycled, and any material that cannot be recycled will be disposed of off-site 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 on-site 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 re-fueling 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 contains dielectric oil, a type of insulating fluid. During routine maintenance of the transformers used oil would be produced.

Crab Run Solar will develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan for the site to protect surface and ground water contamination. A copy of the SPCC Plan will be kept on-site for facility staff to review and follow.

Proper personal protective equipment (PPE) will be provided to facility staff, who 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 on-site.

Designated waste management companies will manage any waste generated on-site. Waste produced on-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-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 is in the operation phase, no waste is expected to be generated from the site outside of maintenance activities. Any waste generated during maintenance activities will be removed from the Project Area 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, including an on- or off-site groundwater well, or trucked from an off-site water purveyor.

Water use related to construction activities will include 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.

The solar electric generation process is not water intensive. Manual washing of solar panels is not anticipated. Rainfall in the region will suffice to remove dust and other debris from the photovoltaic (PV) panels.

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

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