Kansas Sky Energy Center Decommissioning/Reclamation Plan

Free State Solar Project, LLC

Kansas Sky Energy Center
Project No. 147658

Revision 5
10/27/2023

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prepared for

Free State Solar Project, LLC
Kansas Sky Energy Center
Douglas County, Kansas

Project No. 147658

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prepared by

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
BMP	Best management practices
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
Client	Free State Solar Project, LLC
Free State	Free State Solar Project, LLC
kV	Kilovolt
MWac	Megawatt, alternating current
O&M	Operations and Maintenance
Project	Kansas Sky Energy Center
Project Site	Location of the Project in Douglas County, Kansas
Regulation	Douglas County, Kansas Zoning Regulations Section 12-306-49.06.d.18
SPP	Southwest Power Pool
SWPPP	Stormwater Pollution Prevention Plan
Study	Decommissioning/Reclamation Plan

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1.0 INTRODUCTION

1.1 Study Overview

Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell") was retained by Free State Solar Project, LLC ("Free State") to conduct a decommissioning/reclamation cost evaluation (the "Study") for the proposed Kansas Sky Energy Center (the "Project"). The objective of the Study was to review the Project and to make a recommendation regarding the decommissioning plan for retiring the facility at the end of its useful life.

1.2 Project Overview

Kansas Sky Energy Center is a proposed utility scale photovoltaic solar generation project, with a nameplate capacity of 159 megawatts alternating current ("MWac"). The Project is located adjacent to the City of Lawrence, Kansas and within Douglas County ("Project Site"). The Project Area is approximately 1,000 acres, with a Site Area of 604 acres. The Project will interconnect into the transmission grid at the Midland Junction 115 kilovolt ("kV") substation, subject to Southwest Power Pool ("SPP") interconnection studies. The Project is being developed by Savion, LLC and proposed to be built, owned and operated by Evergy pending regulatory approvals.

1.3 Applicable Regulations

Decommissioning obligations are not currently regulated in applicable state or federal law; however, the current Douglas County, Kansas Zoning Regulations Section 12-306-49.06.d.18 ("Regulation") requires removal of all structures and cabling to a depth of 36 inches below grade. This report assumes that (i) all above-grade structures associated with the Project will be removed and (ii) all Project equipment, structures, and supporting facilities will be removed to a depth of 36 inches below grade, in accordance with the Regulation.

1.4 Site Visit

Burns & McDonnell did not visit the Project as part of this Study. The contents of this evaluation are based exclusively upon desktop analysis by Burns & McDonnell.

2.0 PROJECT OVERVIEW

2.1 General

The decommissioning cost evaluation for the Study was prepared by Burns & McDonnell based on the following assumptions regarding the Project facilities. The overall Project configuration that was used as the basis for this Study is shown in Appendix A. However, the final project design is subject to change pending local discretionary approval and final equipment procurement.

2.2 Solar Array System

The Project is expected to utilize approximately 237,300 Canadian Solar CS7N 670-Watt solar modules. Each solar module with frame included was estimated to weigh approximately 83 pounds and have approximate dimensions of 51 inches by 94 inches.

The fenced area of the Project encompasses approximately 604 acres; approximately 62,000 linear feet of fence was assumed to be installed. The land within the perimeter fencing is predominantly agricultural. Approximately 25% of this area was assumed to be disturbed and will require grading and reseeding as part of decommissioning.

All above-grade equipment within the perimeter fence of the array will be removed as part of decommissioning, including the modules, tracking system, and fencing. All salvageable materials will be loaded onto trucks and hauled to a scrap yard for recycling. All other materials will be loaded onto trucks and hauled to a local landfill for disposal once the necessary waste profiles have been obtained for disposal.

All below-grade equipment and foundations associated with the array will be removed to a depth of 36 inches below grade in accordance with the Regulation. Voids left from the removal of the below-grade foundations will be backfilled with surrounding soils and fine graded to provide suitable drainage.

2.3 Tracking System and Supports

Solar tracking systems are used to maximize the system's electricity production by moving the solar panels to follow the sun through the day. These type of tracking systems are configured to operate automatically and optimize the angle at which the solar panels receive solar energy (radiation). NX Horizon Smart single axis trackers were assumed to be installed.

All above-grade equipment associated with the tracking system will be removed as part of decommissioning, including the tracking system and posts. All salvageable materials will be loaded onto

trucks and hauled to a scrap yard for recycling. All other materials will be loaded onto trucks and hauled to a local landfill for disposal.

All below-grade equipment and steel piles associated with the tracking system will be removed to a depth of 36 inches below grade in accordance with the Regulation. The Project design at the time of the Study included steel H piles to support the tracking system. Voids left from the removal of the below-grade piles will be backfilled with surrounding soils and fine graded to provide suitable drainage.

2.4 Inverter Stations

The combined inverters and transformers, also known as inverter stations, generally sit on small concrete footings or concrete ballasts on steel piles within the array. A quantity 43 inverter stations were assumed to be removed as part of decommissioning.

All above-grade equipment associated with the inverter stations will be removed as part of decommissioning. All salvageable materials will be loaded onto trucks and hauled to a scrap yard for recycling. All other materials will be loaded onto trucks and hauled to a local landfill for disposal.

All below-grade equipment and foundations associated with the inverter stations will be removed to a depth of 36 inches in accordance with the Regulation. Voids left from the removal of the below-grade foundations will be backfilled with surrounding soils and fine graded to provide suitable drainage.

2.5 Electrical Cabling

Below-grade cabling was assumed to be buried at a minimum depth of 36 inches below grade. At this depth, all below-grade cables are assumed to remain in place after the Project is decommissioned as they exceed the Regulation. As such, the demolition contractor will dig to 36-inch depth where the cables enter the ground in order to clip down to the 36-inch depth. Additionally, per the Regulation, a map of the buried lines will be provided to One Call, and an affidavit will be attached to the deed of the property to note that buried cables, deeper than 36 inches, are present on the property. However, if the demolition contractor deems the salvageable value of the cabling to be greater than the cost for removal, the contractor may elect to remove the cabling at its own cost.

2.6 Access Roads

The Project will utilize access roads to support construction and allow for vehicle access to facilitate inspections and maintenance of the solar panels and associated equipment during operation. Access roads were assumed to be 16-feet wide and surfaced with 10 inches of crushed rock. A total of approximately

52,000 linear feet of access roads was assumed to be installed, including for entry roads and substation roads.

All crushed rock surfacing will be removed from the Project's access roads. The removed crushed rock will be loaded into dump trucks and hauled offsite. Crushed rock can be recycled and reused and typically has a salvage value as a commodity equal to or greater than the cost to haul to an end user. However, for the purpose of this Study, the cost to remove the crushed rock, load it into dump trucks, and haul it offsite was assumed to be at the expense of the Project.

Areas where crushed rock surfacing has been removed will be fine graded to provide suitable drainage. In right-of-way and non-agricultural areas, the ground will be seeded to prevent erosion.

2.7 Project Substation

Power from the solar and storage project is delivered via power cables to the Evergy Midland 115 kV on-site substation where it is transformed to a higher voltage. All above-grade equipment within the perimeter fence of the substation will be removed as part of decommissioning, including transformers, breakers, switches, buildings, crushed rock surfacing, and fencing. Weights, dimensions, and specifications for this equipment were each assumed by Burns & McDonnell for the purpose of this Study. All salvageable materials will be loaded onto trucks and hauled to a scrap yard for recycling. All other materials will be loaded onto trucks and hauled to a local landfill for disposal.

All below-grade equipment and foundations associated with the substation will be removed to a depth of 36 inches below grade in accordance with the Regulation. Voids left from the removal of the below-grade foundations will be backfilled with surrounding soils and fine graded to provide suitable drainage.

2.8 Transmission Line

The Project is interconnected to the regional electric transmission grid through an existing high-voltage transmission line. However, this transmission line was assumed to remain in place following decommissioning of the Project and, as such, the removal of this line and any costs associated therewith were excluded from this study.

2.9 Maintenance Facility

The Project is expected to include an on-site operations and maintenance ("O&M") building as well as a parking lot. The maintenance area, including the building and parking area, will have dimensions of approximately 100 feet by 130 feet. Details of the O&M building were not available at the time of the

Study. The O&M building is assumed to have a concrete foundation. The maintenance facility is assumed to be removed as part of the decommissioning project.

3.0 DECOMMISSIONING PLAN

3.1 Decommissioning Plan

When it is determined that the Project should be retired, the Project equipment will be removed as noted herein. It was assumed that the Project will incur costs for removal and disposal of the solar project components, foundations, and other Project facilities, as well as for the restoration of the site following the removal of equipment. However, the above-grade steel, aluminum, and copper equipment is expected to have significant scrap value to a salvage contractor that will offset a portion of the decommissioning costs. All recyclable materials will be recycled to the extent possible, while all other non-recyclable waste materials will be disposed of in accordance with state, local, and federal waste disposal regulations.

Prior to commencing activities associated with foundation removal, crushed rock surfacing removal, or any other earthwork, an approved erosion control plan will need to be developed by the demolition contractor. Best management practices ("BMPs") applicable at the time that decommissioning activities occur will need to be implemented by the contractor for control of storm water runoff and a construction stormwater pollution prevention plan ("SWPPP") will be developed as necessary. Since decommissioning activities are not anticipated to occur for at least 25 years, BMPs may differ from current standards, although if decommissioning takes place in the near future, Burns & McDonnell would anticipate BMPs such as silt fencing, proper compaction, seeding, and mulching practices to be implemented. BMPs will need to be reviewed by the contractor prior to commencing decommissioning activities to determine the appropriate BMPs at that time. In line with the Regulation, the soil shall also be tested following removal of equipment and compared with preliminary soil testing to evaluate any soil contamination and develop a remediation program, if needed. This program may include activities to address soil health relating to the amounts of nitrogen, phosphorus, and potassium, for example, in the soil To the extent necessary, permits relating to decommissioning activities will need to be obtained, including a construction SWPPP as well as any other permits from the Environmental Protection Agency deemed necessary at the time of decommissioning. The costs included in this Study are expected to be sufficient for a demolition contractor to develop suitable plans for the control of surface water drainage and water accumulation as well as for backfilling, soil stabilization, compacting, and grading prior to commencing demolition activities.

As part of decommissioning, all disturbed areas at the site will be returned to as close to predevelopment conditions as practicable. The cost estimates provided herein include activities and costs to return the land to a condition suitable for agricultural use subsequent to decommissioning of the Project.

The activities associated with the decommissioning plan described above are anticipated to be completed within a 6-month timeframe, including approximately two months for planning, and permitting activities; approximately three months for demolition; and approximately one month for site restoration. Additional time may be required for post-decommissioning activities, including monitoring of new vegetation. However, this timetable and the cost estimates below should provide sufficient time and budget to comply with any applicable health and safety regulations.

3.2 General Decommissioning Assumptions

In addition to other assumptions noted herein, the following general assumptions were utilized for the Study's decommissioning cost estimates:

1. All costs are presented in current (2023) dollars using a site cost index of 97.2% for Topeka, Kansas.
2. The estimates provided herein are expected to be updated periodically over the life of the Project to account for adjustments to market pricing and future conditions.
3. An offsite landfill (HAMM Sanitary Landfill) is used for disposal of demolition waste. The hauling distance to this landfill is approximately 9 miles from the Project and the cost for disposal of debris and concrete is $60 per ton at this landfill.
4. Scrap values are based upon an average of monthly American Metal Market prices over the most recent 12-month period (May 2022 through April 2023). These values include the cost to haul the scrap via truck and/or rail to the major market which provides the best market at the time of this Study is Chicago, Illinois. Prices used include the following:
    a. Steel scrap value of $281.66 per net ton,
    b. Copper scrap value of $2.85 per net pound,
    c. Aluminum scrap value of $0.39 per net pound.
5. All containers and chemical storage tanks owned by the Project were assumed to be drained and the contents disposed of prior to demolition; these costs are excluded from the estimate. No allowances are included for unforeseen environmental remediation activities.
6. All underground equipment will be removed to a depth of 36 inches below grade in accordance with the Regulation. All non-hazardous structures or foundations greater than 36 inches below grade will remain and are excluded from the decommissioning estimate.
7. It was assumed that all disturbed areas will be restored to original grade, reclaimed with native soils, seeded, and replanted with native vegetation consistent with the surrounding land use.
8. Transformers will be removed and processed on-site. The cost to drain and dispose of transformer oil off-site is included in the decommissioning cost estimate.

9. The Project laydown yards utilized during construction of the Project were assumed to have been previously reclaimed and restored; no further grading, seeding, or other restoration of these areas is included in this estimate.
10. Cost estimates include 5 percent indirect and 10 percent contingency. Burns & McDonnell typically recommends a contingency of 20 percent; however, at the request of Kansas Sky Energy Center, a contingency of 10 percent was applied to the estimate provided herein.
11. Market conditions may result in cost variations at the time of contract execution.
12. Valuation and sale of land, as well as replacement generation costs, are excluded from this scope.

4.0 RESULTS

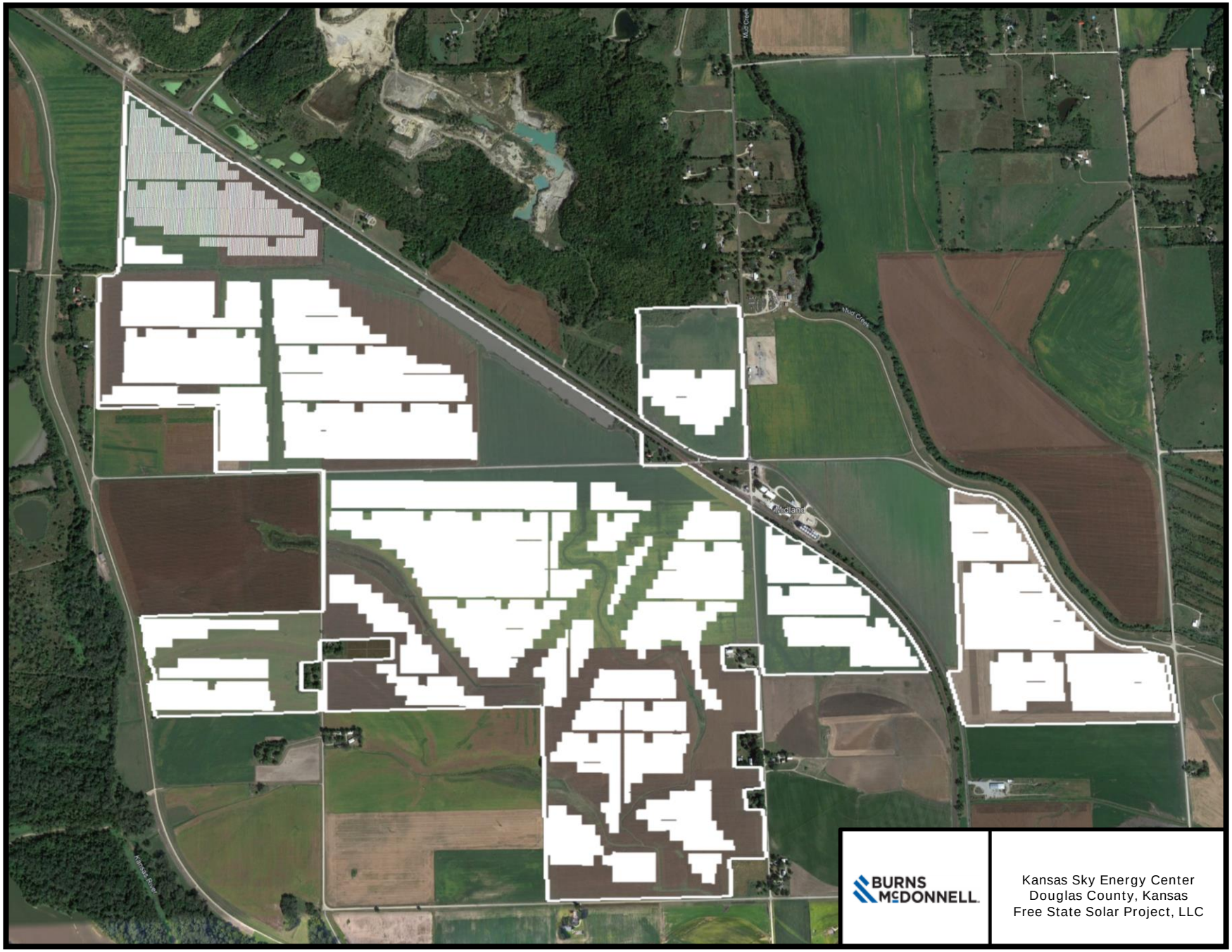
The total cost to decommission the Project at the end of its useful life, based on the assumptions noted herein, is estimated to be approximately $3,262,000; a detailed breakdown of these costs is included in Table 4-1 the table below.

Table 4-1: Estimated Decommissioning Costs (2023$)

Project Facilities		**Cost**
Solar Array	$	6,880,200
Roads	$	335,500
Perimeter Fencing	$	500,600
Concrete / Debris	$	38,400
Project Substation	$	197,800
O&M Building	$	183,800
Site Restoration	$	926,200
Total Estimated Cost	**$**	**9,062,600**
Owner Indirects (5%)	$	453,100
Contingency (10%)	$	906,300
Total Gross Cost	**$**	**10,422,000**
Estimated Scrap / Salvage Value	$	(7,159,800)
Total Net Cost	**$**	**3,262,200**

APPENDIX A – PROJECT SITE LAYOUT

Figure A-1: Project Site Layout



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