

APPENDIX Q – DECOMMISSIONING PLAN & COST ESTIMATE

KN309 Solar Facility Decommissioning Plan

1.0 Facility Description

TPE IL KN309, LLC Solar Photovoltaic Facility is a 4.99 MW AC solar farm proposed at S Lorang Road, Elburn, IL 60118 in Kane County (the "Facility"). The Facility is to be constructed on approximately 38 acres located primarily on farmland without buildings. The purpose of the Facility is the generation of electricity. The Project will be interconnected to the Commonwealth Edison ('ComEd') electric distribution grid near the site's access point on the east side of the site, along S Lorang Rd.

The Facility will be a ground-mounted solar array. The solar panels will be mounted on steel and aluminum structures consisting of posts, beams, rails and bracing. Vertical steel posts will be driven into the ground to a depth of approximately eight feet to anchor the structures. The solar panels will be connected to the inverters mounted on the racking structure via copper and aluminum wire. The inverters will connect to electric panels, transformers, and then switchgear at the array location via underground wire. Output from the Facility will be connected overhead to the existing utility distribution lines.

The estimated useful Facility lifetime is 25 years or more. The following list is a summary of the site features:

- 5 MW Solar array consisting of silicone solar panels.
- Driven post steel and aluminum racking system.
- 8' Security fence surrounding the array perimeter
- 1 Slab on grade concrete pads for electrical equipment, including inverter and transformer.
- Copper and aluminum wire
- Underground conduit at the array location
- Overhead poles and wires from the array location to utility poles
- Gravel access roads
- Miscellaneous electrical equipment

2.0 Project Decommission and Recycling

The Facility consists of numerous materials that can be resold or recycled for significant scrap value, including steel, aluminum, glass, copper, and plastics. (Often, current market salvage values of a Facility exceed estimated decommissioning and site restoration expenses.) The Facility has an anticipated operational life of 25 years or longer if properly maintained. At the end of operational life of the Facility, the Facility will be safely dismantled using conventional construction equipment, rather than being demolished or otherwise disposed of.

2.1 Temporary Erosion Control

Temporary erosion and sedimentation control best management practices will be used during the decommissioning phase of the Facility. Control features will be regularly inspected during the decommissioning phase and removed at the end of the process. All decommissioning activities will conform with local and state regulations. Demolition debris shall be placed in temporary onsite storage area(s) pending final transportation and/or recycling according to the procedures listed below.

2.2 Permits and Approvals

It is anticipated a NPDES Permit from the Illinois Environmental Protection Agency (IEPA) and a SWPPP will be required. The proposed development area of the site does contain protected resources but review from the Illinois Department of Natural Resources concluded that adverse effects are unlikely, terminating consultation; thus, no federal approvals are expected. Appropriate applications for permits will be submitted and approved prior to decommission activities.

2.3 Material Removal Process

The decommission process will consist of the following general steps:

- 2.3.1 Facility shall be disconnected safely from the power grid and all equipment shall be switched to off position.
- 2.3.2 PV modules shall be disconnected, packaged, and returned to manufacturer or appropriate facility for recycling, or resold for other project use.
- 2.3.3 Above and underground cabling shall be removed and sent to an appropriate recycling facility or sold for salvage value.
- 2.3.4 Inverters will be disconnected from racking and shipped intact to an approved electrical equipment recycler or appropriately disposed of.
- 2.3.5 Racking materials shall be dismantled, removed, and recycled off-site at an approved recycler, sold for scrap value, or appropriately disposed of.
- 2.3.6 Fencing will be dismantled, removed, and recycled off-site at an approved recycler, sold for scrap value, or appropriately disposed of.
- 2.3.7 Grade slabs will be broken and removed and appropriately disposed of in compliance with local and state regulations.
- 2.3.8 All remaining electrical and support equipment will be dismantled, decontaminated (if appropriate) and recycled, sold for scrap value, or disposed of.

2.4 PV Module Removal and Recycling

Solar photovoltaic modules used in the Facility are manufactured within regulatory requirements for toxicity based on Toxicity Characteristic Leaching Procedure (TCLP). The solar panels are not considered as hazardous waste. The panels used in the Facility will contain silicon, glass, and aluminum, which have value for recycling. Solar panels have a warranty of 20 – 25 years and useful life of 35 – 50 years or longer. The most realistic outcome for solar modules is selling them for re use in other generation projects. Modules will be sold for re use or dismantled and packaged per manufacturer or approved recyclers specifications and shipped to an approved off-site approved recycler. Per the Health and Safety Impacts of Solar Photovoltaics White Paper by North Carolina State University, section 1.2.3 Panel End-of-Life Management, modules can be recycled at the time of decommissioning.

2.5 Electric Wire Removal

Electric wire made from copper or aluminum has scrap value for recycling. DC wiring can be removed manually from the panels to the inverter. Underground wire in the array of the array will be pulled and removed from the ground. Overhead cabling for the interconnection will be removed from poles. All wire will be sent to an approved recycling facility or sold for scrap value.

2.6 Electrical Equipment Removal

Inverters, panels, transformers, switchgear, and other electrical equipment will be dismantled, packaged, and removed from the site per manufacture's specifications for removal, decontamination, disposal or recycling. Any dielectric fluids present in transformer, or other electric equipment will be removed, packaged, and set to an approved waste facility.

2.7 Racking and Fencing removal

All Racking and fencing material will be broken down into manageable units and removed from facility and sent to an approved recycler or sold for scrap value. All racking posts driven into the ground will be pulled and removed.

2.8 Concrete Slab Removal

Concrete slabs used as equipment pads will be broken and removed and appropriately disposed of in compliance with local and state regulations. Clean concrete will be crushed and disposed of off-site and or recycled and reused either on or off-site.

2.9 Roads

Gravel from on-site access roads shall be removed and recycled. Once the gravel is removed, the soil below the access roads shall be scarified a depth of 18-inches and blended as noted in the Site Restoration section below.

2.10 Landscaping

Unless requested in writing to remain in place by the landowner, all vegetative landscaping installed as part of the Project will be removed. Any weed control measures used during the project, including weed-control fabrics or other ground covers shall be removed. Landscape areas will be restored as noted in the Site Restoration section below.

2.11 Site Restoration

Once removal of all Project equipment and landscaping is complete, all areas of the project site that were traversed by vehicles and Construction and/or Decommission equipment that exhibit compaction and rutting shall be restored. All prior agricultural land shall be ripped at least 12 inches deep or to the extent possible. The existence of drainage tile lines or underground

utilities may necessitate less ripping depth. The disturbed area shall then be disked. Once this is complete, seed shall be distributed.

2.12 Final Site Walkthrough

A final site walkthrough will be conducted to remove debris and/or trash generated within the site during the decommissioning process and will include removal and proper disposal of any debris that may have been wind-blown to areas outside the immediate footprint of the Facility being removed.

3.0 Decommissioning Terms

The Facility shall be decommissioned within 12 months of the end of the Facility's operational life, but outside of the winter season.

Per the requirements of the Illinois Department of Agriculture (IDOA), an Agricultural Impact Mitigation Agreement (AIMA) must be signed by the Facility owner and filed with the County Board. The IDOA prepared the AIMA to help preserve the integrity of Agricultural Land that is impacted by the Construction and Decommission of a Commercial Solar Energy Facility. Per the AIMA, all solar panels shall be removed from the property and the land at completion of the decommissioning phase as described in this document, and expiration of site lease, the land will be returned to the owner in substantially the existing condition as of the date hereof.

4.0 Decommissioning Cost Estimate

Kimley-Horn prepared the attached Decommissioning Estimate utilizing Industry Standard prices in 2024. Removal costs were determined using RS Means Cost Data. Removal costs includes materials, contractor installation/demolition, and mobilization and demobilization.

5.0 Attachments

- Decommissioning Cost Estimate

Project Name: TPE, IL KN309, LLC

Project Locality: Kane County

Decommissioning Estimate Pro Forma without Salvage



The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs. LS = Lump Sum, HR = Hours, EA = Each, LF = Linear Feet.

Item	Quantity	Unit	Unit Price	Total Price
Mobilization	1	LS		\$12,260
Contractor's G&A	1	LS		\$2,090
SWPPP, Erosion Control Measures	38	AC	\$670.00	\$25,460
Seeding	2.0	AC	\$2,514.05	\$5,028
Tilling 6" topsoil/scarifying access road and rough grading existing soil	1	AC	\$16,639.19	\$16,639
Remove Chainlink Fence, 8' High	5,459	LF	\$5.52	\$30,134
Remove Power Pole	6	EA	\$773.37	\$4,640
Remove AC Cables	148,642	LF	\$0.27	\$40,133
Remove DC Cables	54,118	LF	\$0.32	\$17,318
Remove Inverters	1	EA	\$8,045.75	\$8,046
Remove Photovoltaic Modules	13,520	EA	\$5.21	\$70,439
Remove Piles	2,283	EA	\$5.14	\$11,735
Remove Support Assemblies	385,809	LB	\$0.04	\$15,432
Total:				\$259,354

Notes:

1. Quantities were recorded on 02/21/2024.
2. Equipment rental rates and labor productivity and unit rates were derived from RSMeans Online (Heavy Construction, 2024 data).
3. Labor, material, and equipment rates are based on the RSMeans City Cost Index (CCI) for North Suburban, IL.
4. For PV Module Removal/Recycle labor and equipment costs are computed at present values.
5. This estimate assumes 26 modules/tracker for one-third length tracker, 52 modules/tracker for two-thirds length trackers, and 78 modules/tracker for full length trackers.
6. This estimate assumes 5 piles/tracker for one-third length tracker, 9 piles/tracker for two-thirds length trackers, and 13 piles/tracker for full length trackers.
7. This estimate assumes 77,162 LB of support assemblies per 1 MW output.



EXPIRES: 11/30/2025

