A DECOMMISSIONING PLAN FOR

Gibson Solar Project

Gibson County, Indiana

DECEMBER 15, 2023

PREPARED FOR:

AREVON

PREPARED BY:

Westwood

Westwood

Decommissioning Plan

Gibson Solar Project

Gibson County, Indiana

Prepared for:

Arevon Energy
8800 North Gainey Center Drive
Suite 250
Scottsdale, AZ 85258

Prepared by:

Westwood Professional Services
12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343
(952) 937-5150

Project Number: 0027287.00

Date: December 15, 2023

Table of Contents

Attachments

1.0 Introduction / Project Description

This Decommissioning Plan (Plan) has been prepared for the Gibson Solar Project in accordance with the Gibson County Solar Ordinance 2021-03 and Decommissioning Agreement for the facility. The purpose of the Plan is to describe the means and methods that can be used to remove all structures, foundations, underground cables, and equipment and to reclaim and restore the land altered during the construction and operation of the solar project to its predevelopment condition to the extent feasible.

The Gibson Solar Project (Facility) is a 200-Megawatt (MW) alternating current (AC), 249-MW direct current (DC), solar power generation project proposed by Arevon (Owner) in Gibson County, Indiana. Upon completion, the Facility will comprise a solar array consisting of ground-mounted photovoltaic panels and electrical support equipment, underground and overhead collection lines, a substation, access roads, and fencing. The Facility is located on approximately 1,088 acres.

The useful life of solar panels is generally considered to be 35 years. At that time, the Facility will either be decommissioned or repowered with newer technology. The Plan identifies components which may be removed and areas that may be restored once the Facility has not operated for twelve consecutive months, or when the Facility has surpassed the useful lifespan of the modules and facilities.

2.0 Proposed Future Land Use

Prior to the development of the Facility, the land use of the project area was primarily agricultural production. After all equipment and infrastructure is removed during decommissioning, any holes or voids created by poles, concrete pads, and other equipment will be filled in with native soil to the surrounding grade, and the site will be restored to pre-construction conditions to the extent practicable. All access roads and other areas compacted by equipment will be decompacted to a depth necessary to ensure drainage of the soil and root penetration prior to fine grading and tilling to a farmable condition. Please refer to Section 3.2 for a detailed description of reclamation activities.

3.0 Decommissioning Activities

Decommissioning of the solar Facility will include removing the solar panels, solar panel racking, steel foundation posts and beams, inverters, transformers, overhead and underground cables and lines, equipment pads and foundations, equipment cabinets, and ancillary equipment. The civil facilities, access roads, security fence, and drainage structures and sedimentation basins are included in the scope. Standard decommissioning practices will be utilized, including dismantling and repurposing, salvaging/recycling, or disposing of the solar energy improvements.

During decommissioning, the landowners will be consulted to identify the extent and type of

work to be completed. Some Facility infrastructure, such as the access roads, may be left in place at the landowners' requests as may be allowed by federal, state, and local laws at the time of decommissioning. Underground utility lines, if deeper than four feet below ground surface elevation, may be left in place to minimize land disturbance and associated impacts to future land use.

Decommissioning will include the removal and transportation of all project components from the Facility site. All dismantling, removal, recycling, and disposal of materials generated during decommissioning will comply with rules, regulations, and prevailing Federal, State, and local laws at the time decommissioning is initiated and will use approved local or regional disposal or recycling sites as available. Recyclable materials will be recycled to the furthest extent practicable. Non-recyclable materials will be disposed of in accordance with State and Federal law.

3.1 Decommissioning of Project Components

3.1.1 Modules

Modules will be inspected for physical damage, tested for functionality, and disconnected and removed from racking. Functioning modules will be packed, palletized, and shipped to an offsite facility for reuse or resale. Non-functioning modules will be shipped to the manufacturer or a third party for recycling or disposal. The decommissioning estimate has been prepared to show the costs for the current year. At the end of life, the modules will have negligible resale value.

3.1.2 Racking

Racking and racking components will be disassembled and removed from the steel foundation posts, processed to appropriate size, and sent to a metal recycling facility.

3.1.3 Steel Foundation Posts

All structural foundation steel posts will be pulled out to full depth, removed, processed to appropriate size, and shipped to a recycling facility. The posts can be removed using back hoes or similar equipment. During decommissioning, the area around the foundation posts may be compacted by equipment and, if compacted, the area will be decompacted in a manner to adequately restore the topsoil and sub-grade material to a density consistent for vegetation.

3.1.4 Overhead and Underground Cables and Lines

All underground cables and conduits will be removed to a depth of four feet. For the purposes of this decommissioning cost estimate, it has been assumed that all cables will be installed deeper than four feet below ground and may therefore be abandoned in place, with the exception of those cables running to surface equipment. Topsoil will be segregated and stockpiled for later use prior to any excavation and the subsurface soils will be staged next to the excavation. The subgrade will be compacted per standards. Topsoil will be redistributed across the disturbed area. Overhead lines, support poles, and attachments will be removed from the project and taken to a recycling facility.

3.1.5 Inverters, Transformers, and Ancillary Equipment

All electrical equipment will be disconnected and disassembled. All parts will be removed from the site and reconditioned and reused, sold as scrap, recycled, or disposed of appropriately, at

the Owner's sole discretion, consistent with applicable regulations and industry standards.

3.1.6 Equipment Foundations and Ancillary Foundations

The ancillary foundations are pile foundations for the equipment pads. As with the solar array steel foundation posts, the foundation piles will be pulled out completely. Duct banks will be excavated to full depth. All unexcavated areas compacted by equipment used in decommissioning will be decompacted in a manner to adequately restore the topsoil and sub-grade material to a density similar to the surrounding soils. All materials will be removed from the site and reconditioned and reused, sold as scrap, recycled, or disposed of appropriately, at the owner's sole discretion, consistent with applicable regulations and industry standards.

3.1.7 Fence

All fence parts and foundations will be removed from the site and reconditioned and reused, sold as scrap, recycled, or disposed of appropriately, at the Owner's sole discretion, consistent with applicable regulations and industry standards. The surrounding areas will be restored to pre-solar farm conditions to the extent feasible.

3.1.8 Access Roads

Facility access roads will be used for decommissioning purposes, after which removal of roads will be discussed with the landowner(s) and one of the following options will be pursued:

1. After final clean-up, roads may be left intact through mutual agreement of the landowner and the Owner unless otherwise restricted by federal, state, or local regulations.
2. If a road is to be removed, aggregate will be removed and shipped from the site to be reused, sold, or disposed of appropriately, at the Owner's sole discretion, consistent with applicable regulations and industry standards. Clean aggregate can often be used as "daily cover" at landfills for no disposal cost. All internal service roads are constructed with geotextile fabric and eight inches of aggregate over compacted subgrade. Any ditch crossing connecting access roads to public roads will be removed unless the landowner requests it remains. The subgrade will be decompacted in a manner to adequately restore the topsoil and sub-grade material to a density consistent for reintroduction of farming. Topsoil that was stockpiled during the original construction will be distributed across the open area. Finally, the access road corridors will be revegetated with an approved seed mix.

3.1.9 Substation

Decommissioning of the project substation will be performed with the rest of the Facility. All steel, conductors, switches, transformers, and other components of the substation will be disassembled and taken off site to be recycled or reused. Foundations and underground components will be removed to a depth of four feet. The rock base will be removed using bulldozers and backhoes or front loaders. The material will be hauled from the site using dump trucks to be recycled or disposed at on off-site facility. Additionally, any permanent stormwater treatment facilities (e.g., infiltration ponds and engineered drainage swales) will be removed. Topsoil will be reapplied to match surrounding grade to preserve existing drainage patterns. Topsoil and subsoil will be decompacted in a manner to adequately restore the topsoil and sub-grade material to a density consistent for reintroduction of farming.

3.2 Reclamation

The Owner will restore and reclaim the site to the pre-solar farm condition consistent with the site lease agreement. The Owner assumes that most of the site will be returned to farmland after decommissioning through implementation of appropriate measures to facilitate such uses. If no specific use is identified, the Owner will vegetate the site with a seed mix approved by the local soil and water conservation district or similar agency. The goal of restoration will be to restore natural hydrology and plant communities to the greatest extent practicable while minimizing new disturbance and removal of native vegetation. In addition to the reclamation activities described above for each decommissioning activity, all unexcavated areas compacted by equipment and activity during the decommissioning will be decompacted as needed to ensure proper density of topsoil consistent and compatible with the surrounding area and associated land use. Sediment basins will be decompacted and filled to grade as well. All materials and debris associated with the Facility decommissioning will be removed and properly recycled or disposed of at off-site facilities.

4.0 Best Management Practices (BMPs)

4.1 Construction Stormwater Practices

During decommissioning, erosion and sediment control BMPs will be implemented to minimize potential for erosion of site soils and sedimentation of surface waters and waters of the state. Because decommissioning will entail disturbance of more than one acre of soil, the Applicant will prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain coverage under the state-specific National Pollutant Discharge Elimination System (NPDES) permit prior to initiating soil disturbing activities. Potential BMPs to be implemented during decommissioning activities are described below and will be subject to refinement in the SWPPP. The decommissioning team will review the permitting requirements at the time of decommissioning and obtain any other necessary permits, which may include a US Army Corps of Engineers (USACE) Section 404 Permit to Discharge Dredged or Fill Material.

4.1.1 Erosion Control

Erosion control measures will be refined based on the standard of practice current at the time the SWPPP is developed for decommissioning. All disturbed areas without permanent impermeable or gravel surfaces, or planned for use as crop land, will be vegetated for final stabilization. All slopes steeper than 4:1 should be protected with erosion control blankets. Restoration should include seed application prior to application of the blanket. All slopes 4:1 or flatter should be restored with seed and mulch, which will be disc anchored.

4.1.2 Sediment Control

Sediment controls, such as silt fence, fiber logs, dewatering practices, construction entrances, and sedimentation traps and/or basins will be implemented during construction to prevent the transport of sediment off-site during decommissioning activities. Street sweeping/scraping will also be implemented to mitigate potential tracking of sediment onto public roadways.

4.1.3 Controlling Stormwater Flowing Onto and Through the Project

Given the low gradient of the slopes in the project area, controlling stormwater flow that enters

the project area will likely require minimal effort during decommissioning activities. Only newly disturbed areas may require new, temporary stormwater control. If necessary, water may be diverted around the project site using diversion berms.

4.2 Permitting

All decommissioning and reclamation activities will comply with Federal and State permit requirements. Decommissioning activities that will disturb more than one acre of soil will require coverage under the state-specific NPDES permit for construction stormwater. The permits will be applied for and received prior to decommissioning construction activities commencing. A SWPPP will be developed prior to filing for construction stormwater permit coverage.

If necessary for decommissioning activities, wetlands and waters permits will be obtained from the USACE or Indiana Department of Environmental Management (IDEM). A Spill Prevention, Control, and Countermeasure (SPCC) Plan for decommissioning will likely also be required for decommissioning work.

4.3 Health and Safety Standards

Work will be conducted in strict accordance with the Owner's health and safety plan. The construction contractor hired to perform the decommissioning will also be required to prepare a site-specific health and safety plan. All site workers, including subcontractors, will be required to read, understand, and abide by the Plans. A site safety office will be designated by the construction contractor to ensure compliance. This official will have stop-work authority over all activities on the site should unsafe conditions or lapses in the safety plan be observed.

5.0 Timeline

Decommissioning of the solar farm will be initiated if the Facility has not produced electricity for a period of up to twelve months. It is anticipated that the decommissioning activities for the Facility can be completed in a 78-week period. The estimated costs for decommissioning are tied to assumptions about the amount of equipment mobilized, the crew sizes, weather and climate conditions, and the productivity of the equipment and crews.

6.0 Decommissioning Costs

The decommissioning costs are calculated using current pricing. In keeping with the requirements of Gibson County Solar Ordinance 2021-03, the estimate of net costs should be updated every five years to recognize price trends for both decommissioning costs and the salvage and resale values of the components.

There are currently active markets for scrap steel, aluminum, and copper, used transformers and electrical equipment, and used solar panels. Scrap metal prices have been discounted from posted spot prices found on www.scrapmonster.com. Pricing for used panels has been discounted from prices received from We Recycle Solar for a similar project. The pricing of the used panels has incorporated the degradation from five years of use as warrantied by the manufacturer (not more than 0.5% per year).

The total estimated cost of decommissioning the Gibson Solar Project is approximately $11,317,739 ($45,453 per MW). Estimated salvage/scrap value of the modules, racking, transformers, and other materials is approximately $22,355,375. The net decommissioning costs after accounting for resale and salvage values is approximately $11,037,700 in surplus, or $44,328 in surplus per MW.

Attachment A

Decommissioning Cost Estimate

Gibson Solar Project

	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	$680,800.00	$680,800
Mobilization was estimated to be approximately 7% of total cost of other items.				
Permitting				
County Permits	1	Lump Sum	$10,000.00	$10,000
State Permits	1	Lump Sum	$20,000.00	$20,000
Subtotal Permitting				$30,000
Decommissioning will require SWPPP and SPCC Plans. Cost is an estimate of the permit preparation cost.				
Civil Infrastructure				
Remove Gravel Surfacing from Road	21,672	Cubic Yards (BV)	$3.53	$76,511
Haul Gravel Removed from Road to Landfill (Fort Branch, IN)	27,089	Cubic Yards (LV)	$8.92	$241,637
Dispose of Gravel Removed from Road (Landfill uses as Daily Cover)	35,108	Tons	$0.00	$0
Remove Geotextile Fabric from Beneath Access Roads	121,902	Square Yards	$1.40	$170,663
Haul Geotech Fabric to Landfill (Fort Branch, IN)	33.5	Tons	$5.71	$192
Dispose of Geotech Fabric	33.5	Tons	$81.00	$2,715
Remove and Load Culvert from Beneath Access Roads	13	Each	$420.00	$5,460
Haul Culvert Removed from Access Roads to Landfill (Fort Branch, IN)	3.9	Tons	$5.71	$22
Dispose of Culvert	3.9	Tons	$81.00	$316
Grade Road Corridor (Re-spread Topsoil)	54,856	Linear Feet	$1.81	$99,190
Decompact Road Area	25.2	Acres	$89.03	$2,242
Remove Chainlink Fence (Substation)	794.0	Linear Feet	$8.80	$6,987
Haul Chainlink Fence to Metal Recycling (Princeton, IN)	4	Tons	$4.76	$20
Remove Agricultural Fence	116,149.0	Linear Feet	$3.09	$358,900
Haul Agricultural Fence to Metal Recycling (Princeton, IN)	180	Tons	$4.76	$857
Subtotal Civil Infrastructure				$965,714
Civil removal costs are a combination of StDOT unit costs where applicable, RSMeans cost for Evansville, IN, and industry standards provided to Westwood.				
Structural Infrastructure				
Remove Steel Foundation Posts (Arrays, Equipment, Met Towers)	68,537	Each	$15.31	$1,049,361
Haul Array Steel Post to Metal Recycling (Princeton, IN)	4,935	Tons	$3.34	$16,482
Remove Tracker Racking per String	15,904	Each	$161.31	$2,565,415
Haul Tracker Racking to Metal Recycling (Princeton, IN)	12,566	Tons	$3.34	$41,971
Remove Drive Motor Posts	4,409	Each	$15.31	$67,506
Haul Drive Motor Posts to Metal Recycling (Princeton, IN)	317	Tons	$3.34	$1,060
Subtotal Structural Infrastructure				$3,741,795
Steel removal costs were calculated by using RSMeans information for demolition of steel members.				
Hauling calculations are based on the locations of metals recyclers.				
Electrical Collection System				
Remove PV Panels	429,408	Each	$7.68	$3,298,390
Haul PV 95% of Panels to Reseller (Louisville, KY)	14,390	Tons	$25.61	$368,484
Haul 5% of PV Panels to Landfill (Fort Branch, IN)	757	Tons	$5.71	$4,328
Dispose of PV Panels	757	Tons	$81.00	$61,345
Remove Combiner Boxes	64	Each	$60.00	$3,840
Remove Equipment Skids	64	Each	$1,107.22	$70,862
Remove Equipment Pad Piles	512	Each	$15.31	$7,839
Haul Equipment Skid Steel Post to Metal Recycling (Princeton, IN)	37	Tons	$3.34	$123
Haul Equipment to Transformer Disposal (Washington, IN)	64	Each	$260.53	$16,674
Remove SCADA Equipment	1	Each	$2,000.00	$2,000
Remove DC Collector System Cables (copper)	249	Per MW	$2,000.00	$498,000
Remove Underground (AC) Collector System Stub-Ups	64	Locations	$400.00	$25,600
Load and Haul Cables for Recycling	25	Tons	$3.34	$84
Subtotal Electrical Collection				$4,357,569
Electrical removal costs of PV Panels and Combiner Boxes were based industry standard installation rates. Equipment pads, MV Equipment, and SCADA Equipment removal cost are based on removal of equipment, concrete pads, and conduits using a truck mounted crane and RSMeans information on crew production rates.				

Transmission System				
Remove Overhead Cables	805	Feet	$7.90	$6,360
Loadout Overhead Cables	1.6	Tons	$37.00	$60
Haul Overhead Cables	1.6	Tons	$3.34	$5
Remove and Load Timber Transmission Poles	3	Each	$417.97	$1,254
Haul Timber Poles to Landfill (Fort Branch, IN)	10	Tons	$5.71	$56
Haul Hardware, Bracing, and Attachments to Landfill (Fort Branch, IN)	2	Cubic Yards	$7.79	$13
Dispose of Transmission Pole Components	3	Each	$81.00	$243
Topsoil and Revegetation at Removed Poles	3	Each	$2.47	$7
Subtotal Transmission System				$7,997
Substation				
Disassemble and Remove Main Power Transformer(s)	1	Each	$4,500.00	$4,500
Haul Transformer(s) Offsite	222	Tons	$10.42	$2,317
Haul Transformer Oil Offsite	28,755	Gallons	$0.09	$2,588
Dispose of Transformer (Including Oil) (Salvage Value)	1	Each	$0.00	$0
Excavate Around Transformer Foundation(s)	1	Each	$962.50	$963
Remove Complete Transformer Foundation(s)	70	Cubic Yards	$117.89	$8,252
Backfill Excavation Area from Transformer Foundation Removal	120	Cubic Yards	$44.09	$5,291
Haul Concrete (Foundations Transformer, Switch Gear, etc.)	142	Tons	$5.71	$812
Dispose of Concrete from Transformer Foundation	142	Tons	$0.00	$0
Demolish Substation Site Improvements (fences, etc)	1	LS	$3,500.00	$3,500
Demolish Control Building and Foundation	1	LS	$12,000.00	$12,000
Remove Medium/High Voltage Equipment	1	LS	$3,500.00	$3,500
Remove Structural Steel Substation Frame	1	LS	$3,500.00	$3,500
Remove Copper Ground Grid	1	LS	$3,008.35	$3,008
Load Copper Wire	20,000	Feet	$0.60	$12,044
Haul Copper Wire to Recycling	6.5	Tons	$3.34	$22
Haul - Demolition Materials, Removed Equipment & Structural Steel	10	Tons	$3.34	$33
Dispose of Demolition Materials & Removed Equipment	10	Tons	$81.00	$810
Remove and Load Gravel Surfacing from Substation Site	936	Cubic Yards (BV)	$3.53	$3,306
Haul Gravel Removed from Substation Site	1,170	Cubic Yards (LV)	$7.79	$9,120
Dispose of Gravel from Substation Site (Use as Daily Cover)	1,517	Tons	$0.00	$0
Grade Substation Site	1	LS	$3,008.35	$3,008
Erosion and Sediment Control at Substation Site	745	LF	$4.45	$3,315
Decompact Substation Site (Subsoiling)	0.9	Acres	$89.03	$78
Permanent Seeding at Substation Site	0.9	Acres	$4,307.60	$3,750
Subtotal Substation				$85,716
Site Restoration				
Stabilized Construction Entrance	13	Each	$2,000.00	$26,000
Perimeter Controls (Erosion and Sediment Control)	58,472	Linear Feet	$4.45	$260,198
Permanent Seeding on Roadway Areas	25.2	Acres	$4,307.60	$108,493
Till to Farmable Condition on Array Areas	1,087	Acres	$158.78	$172,602
Subtotal Site Restoration				$567,293
Project Management				
Project Manager	78	Weeks	$3,749.00	$292,422
Superintendent	78	Weeks	$3,525.00	$274,950
Field Engineer	78	Weeks	$3,269.00	$254,982
Clerk	78	Weeks	$750.00	$58,500
Subtotal Project Management				$880,854
Standard industry weekly rates from RSMeans.				
Subtotal Demolition/Removals				$11,317,739

Salvage				
Fencing (Wire/Agricultural)	180	Tons	$221.13	$39,810
Fencing (Chain Link)	4	Tons	$221.13	$935
Steel Posts	4,935	Tons	$221.13	$1,091,185
Module Racking	12,566	Tons	$221.13	$2,778,599
PV Modules	407,938	Each	$44.37	$18,100,191
Transformers and Inverters	371,440	Pounds	$0.27	$100,289
Substation Transformers (Core and Coils)	280,167	Pounds	$0.27	$75,645
Substation Transformers (Tanks and Fittings)	82	Tons	$221.13	$18,181
Transformers (Oil)	79,955	Gallons	$0.70	$55,969
Substation Ground Grid (Copper)	13,060	Pounds	$3.64	$47,538
DC Collection Line Stub-Ups (Copper)	38,579	Pounds	$0.95	$36,457
AC Collection Line Stub-Ups (Aluminum)	12,000	Pounds	$0.74	$8,910
Transmission Lines (Steel)	1	Tons	$289.17	$175
Transmission Lines (Aluminum)	2,009	Pounds	$0.74	$1,492
Subtotal Salvage				$22,355,375

Salvage values are a combination of the following factors; current market metal salvage prices, current secondary market for solar panel module recycling, discussions with national companies that specialize in recycling and reselling electrical transformers and inverters, and the assumption that care is taken to prevent any damage or breakage of equipment.

Total Demolition Minus Salvage	($11,037,700)

Notes:
1. Prices used in analysis are estimated based on research of current average costs and salvage values.
2. Prices provided are estimates and may fluctuate over the life of the project.
3. Contractor means and methods may vary and price will be affected by these.

Cost Estimate Assumptions

To develop a cost estimate for the decommissioning of the Gibson Solar Project, Westwood engineers made the following assumptions and used the following pricing references. Costs were estimated based on current pricing, technology, and regulatory requirements. The assumptions are listed in order from top to bottom of the estimate spreadsheet. When publicly available bid prices or Indiana Department of Transportation (INDOT) bid summaries were not available for particular work items, we developed time- and material-based estimates considering composition of work crews and equipment and material required. While materials may have a salvage value at the end of the project life, the construction activity costs and the hauling/freight costs are separated from the disposal costs or salvage value to make revisions to salvage values more transparent.

1. Project quantities are based on 30% Electrical Design Plans dated 11/06/2023 and geospatial files provided by the client on 11/20/2023. Project quantities not yet determined in the Civil Permitting Plans were extrapolated from projects of similar size.
2. A project of this size and complexity requires a full-time project manager with full-time support staff.
3. Common labor will be used for the majority of tasks, supplemented by electricians, steel workers, and equipment operators where labor rules may require. The labor rates reflect union labor rates.
4. Mobilization was estimated at approximately 7% of total cost of other items.

5. Permit applications will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and a Spill Prevention, Control, and Countermeasure (SPCC) Plan.
6. Road gravel removal was estimated on a time and material basis. Since the material will not remain on site, a hauling cost is added to the removal cost. Clean aggregate can typically be used as "daily cover" at landfills without incurring a disposal cost. The road gravel may also be used to fortify local driveways and roads, lowering hauling costs but incurring placing and compaction costs. The hauling costs to a landfill represents an upper limit to costs for disposal of the road gravel.
7. The selected disposal facility (Gibson County Landfill) is located in Fort Branch, IN, approximately 6 miles from the project site. Hauling costs to the landfill are estimated to be $5.71 per ton.
8. Erosion and sediment control along road reflects the cost of silt fence on the downgradient side of the proposed roads. As such, the length of controls has been estimated to be approximately 50% of the road length.
9. Topsoil is required to be stockpiled on site during construction, so no topsoil replacement is expected to replace the road aggregate. Subsoiling cost to decompact roadway areas is estimated as $89.03 per acre, and tilling to an agriculture-ready condition is estimated as $158.75 per acre.
10. The selected metal recycling facility (Green Metals, Inc.) is located in Princeton, IN, approximately 3 miles from the project site. Hauling costs to the recycling facility are approximately $1.11 per ton mile, or $3.34 per ton.
11. Tracker foundation posts are lightweight "I" beam sections installed with a specialized piece of equipment and can be removed with a standard backhoe with an attachment for gripping the piles. We estimate crew productivity at 240 posts per day, resulting in a per post cost of approximately $15.31. The posts weigh approximately 150 pounds each.
12. It is assumed that the racking structures weigh approximately 15 pounds per linear foot of array. Each solar panel has a width of 44.65 inches. The facility will have approximately 429,408 modules and 1,675,420 feet of array. The arrays are made of steel pipes; a crew with hand tools can disassemble and cut the pieces to sizes for recycling at a rate of about 1800 pounds per person per hour, or about $204.16 per ton.
13. The solar panels for this project measure approximately 3.72 feet by 7.47 feet and weigh 70.55 pounds. They can easily be disconnected, removed, and packed by a three-person crew at a rate we estimate at 18 panels per hour.
14. The equipment skids will consist of inverter(s), a transformer, and a panel on a metal frame approximately 19.9 feet long by 9.5 feet wide by 8 feet tall. The skids weigh approximately 39,683 pounds and can be disconnected by a crew of electricians. They must be lifted by a mobile crane for transport to the recycler. They contain copper or aluminum windings.
15. The transformers contain copper windings that have significant salvage value. They are typically oil filled, but most transformer recyclers will accept the transformers with oil. The estimated costs include removal of metal frame and conduits feeding the equipment.
16. Medium voltage (MV) equipment and SCADA equipment are mounted on the same equipment skids as the inverters and transformers, and they are enclosed in weatherproof cabinets. Their size requires light equipment to remove them. The costs for the removal of the pile foundations are included in the "Remove Steel Foundation Posts" estimate.
17. The underground collector system cables are placed in trenches with a minimum of 48 inches of cover. Several cables/circuits are placed side by side in each trench. The conduits and cables can be removed by trenching.

18. Perimeter control pricing is based on silt fence installation around downgradient sides of the project perimeter.
19. Metal salvage prices (steel, aluminum, copper) are based on December 2023 quotes from www.scrapmonster.com for the Midwest. Posted prices are three months old. These prices are based on delivery to the recycling facility with the material prepared to meet size, thickness, cleanliness, and other specifications.
20. A reduction of 25% has been taken from all pricing obtained from www.scrapmonster.com to reflect the processing by the contractor to meet the specifications.
21. The salvage value for steel uses pricing from the Midwest United States at $325 per metric ton, or $294.84 for U.S. ton.
22. Solar module salvage values are shown in current values, assuming near-new conditions for the first few years of operations. Solar modules are anticipated to degrade at approximately 0.50% per year, or 88% after 25 years. There is currently a robust market for used solar panels. We have assumed that as long as the modules are producing power, they will have economic value. To avoid overestimating the used modules' value, we used pricing of approximately $0.07 per watt based on a We Recycle Solar quote prepared on October 22, 2020. Pricing is based on delivery to their facility. For interim decommissioning, resale of used modules will be most cost effective.
23. There is an active market for reselling and recycling electrical transformers and inverters with several national companies specializing in recycling. However, we have assumed that the electrical equipment will be obsolete at the time of decommissioning, so we have based the pricing on a percentage of the weight that reflects the copper windings that can be salvaged. Pricing was used for Copper Transformer Scrap for the Midwest United States, at $0.36 per pound.
24. The collection lines are priced assuming copper conductor wire for the direct current circuits and aluminum wire for the alternating current circuits. The prices reflect a reduced yield of copper or aluminum resulting from the stripping of insulation and other materials from the wire prior to recycling. The estimate uses the Midwest prices of #2 insulated copper wire with a 50% recovery rate ($1.26 /pound) and E.C. Aluminum Wire ($0.99 /pound).
25. Care to prevent damage and breakage of equipment, PV modules, inverters, capacitors, and SCADA must be exercised, but removal assumes unskilled common labor under supervision.