TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY

Wolf Hills Solar

Decommissioning Plan

Washington County, Virginia

Date: 5/29/2024

This cost estimate was not based on detailed construction drawings but is typical for a project of this size and type. The listed equipment quantities are subject to change based on the actual installed facilities.

Prepared For:

Catalyst Energy

Wolf Hills Solar
Decommissioning Plan

CLIENT NAME	**Cat Reedy Solar, LLC**
PROJECT NAME	**Wolf Hills Solar**
LOCATION	**Washington County, VA**
PROJECT	**Solar PV Electric Generating Project**

Rev.	Date	Description	Prepared	Checked	Approved
0	5/29/2023	Released for Client Use	NBF	KJ	AC

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1 Introduction

The Wolf Hills Solar Project (Project) is a 262-Megawatt (MWac) photovoltaic (PV) solar project located in Washington County, Virginia. The Project will span approximately 2,256 acres (fenced area is approximately 1,575 acres) and will connect to the 138 kV electrical grid at the Wolf Hills Generating Station's switchyard located adjacent to the project site. The switchyard and the interconnecting high voltage transmission line, crossing the Project site, is owned and operated by Appalachian Power and will not be decommissioned. The operational life of the Project is anticipated to be approximately 35 years. This Decommissioning Methodology (Plan) describes the procedures associated with decommissioning the Project and has been created to support the Project's Special Exception Permit.

Within 12 months of initiating the decommissioning, the Project Owner will safely have the relevant components removed from the land and will then restore the site as described below.

This Plan lays out the procedures for restoring the site to its original use, based on the recent historical land use of the property or other economical land uses as desired by the relevant landowner, at the end of the Project's operational life. The Plan describes procedures for the removal of Project components. The components of the Project are described in the Appendix A.

This Decommissioning Plan was developed per Section 66-1245: Decommissioning Agreement, Plan, and Surety of the Washington County Ordinance. Prior to installation of a large-scale project, the property owner shall record in the land records of the Circuit Court of Washington County, a County-approved Decommissioning Agreement. The Decommissioning Agreement shall include the decommissioning plan and the owner's commitment to comply with the County Zoning Ordinance as such may be amended from time to time and shall be written to run with the land and terminate upon removal from the property of the solar project and completion of site restoration.

2 Project Components

Appendix A provides information regarding the anticipated location and description of the Project components. The Project generally consists of the equipment and infrastructure listed below:

- Steel Piers and Racking
- PV Panels
- Inverters
- Transformers
- Electrical Collection Lines
- Grounding System
- Access Roads
- Fencing, Gating, and Safety Features
- Collector Substation
- Operations and Maintenance (O&M) Building (TBD)
- Weather Stations

3 Regulatory Compliance

Prior to the commencement of decommissioning, Wolf Hills will perform the appropriate due diligence requirements and obtain the necessary Washington County, state, and federal approvals to complete decommissioning activities. To mitigate any environmental impact from decommissioning, Wolf Hills will assess the necessary permits and approvals in the future regulatory environment to maintain regulatory compliance. Anticipated types of evaluations may include the following:

- Review of on-site jurisdictional status and potential impacts to wetlands and waterbodies to comply with the Clean Water Act.
- Consultation with the United States Fish and Wildlife Service to evaluate compliance with the Endangered Species Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and any other relevant regulations at the time of decommissioning.
- Consultation with the Virginia Department of Environmental Quality for compliance with any pertinent state regulatory requirements.
- Completion of a Phase I Environmental Site Assessment in support of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) protection.
- Development and implementation of a Stormwater Pollution Prevention Plan (SWPPP).
- Washington County building, road, discharge, or erosion control permits (as necessary).
- Special state or local hauling permits (as necessary).

4 Decommissioning

The Project will be decommissioned at the end of its useful life. The Project is presumed to be at the end of its useful life if the Project generates no electricity for a continuous period of 12 months. At least 40 days prior to the commencement of decommissioning activities, Wolf Hills will notify the Washington County officials. The following general decommissioning activities will occur.

Once the solar Project has been removed, it is expected that the site will be returned to as close to its original condition as possible. Some minor grading may be required; topsoil (if removed) will be reapplied to allow for reseeding and growth. Site restoration will occur no more than twelve (12) months after notification of decommissioning.

The following general decommissioning activities will occur:

Decommissioning Sequence:

1. Obtain required site permits from Authority Having Jurisdiction (AHJ)
2. Disconnect all utility grid power
3. Move all disconnects to the off position
4. Disconnect all above ground wirings, cables, and electrical connections
5. Remove all PV Modules

6. Remove Inverters, mounting equipment, and posts
7. Remove all electrical equipment, and their foundations
8. Remove DAS equipment, feeders, and conduit
9. Remove all above ground mounting equipment components and posts
10. Excavate and remove Underground feeders and conduit
11. Remove Collector Substation and Owner Intersection utility poles
12. Remove access road
13. Remove all fencing
14. Fill/Grade/Seed as needed

Some components may be left in place under certain circumstances. Electrical lines that will not impact future use of the Project Area or Substation foundation (at least 3 feet in depth) may be left in place per renewable industry practices. Steel piles, where full removal is unattainable, may be cut and left in place at a depth of 3 feet or greater below the ground surface. Additionally, landowners may desire that private access roads and/or stormwater facilities remain in place for their use. Wolf Hills will obtain a written request from the landowner for a road or structure (such as the stormwater features) to remain in place.

5 Materials, Recycling, and Disposal

Many components of the Project, such as racking, wiring, piles, and panels, retain value over time. Panels, while slightly less efficient, may be reused elsewhere, or components may be broken down and recycled. Recycling of solar panels and equipment is rapidly evolving and can be handled through a combination of sources such as certain manufacturers, PV Cycle (an international waste program founded by and for the PV industry), or waste management companies. More than 90 percent of the semiconductor material and glass can be reused in new modules and products. Other waste materials that hold no value will be recycled or disposed of via a licensed solid waste disposal Project. If recycling of solar panels is not feasible, disposal will be accomplished in accordance with the requirements of the authority having jurisdiction, and the salvage value will be adjusted.

6 Site Restoration

Following the completion of decommissioning activities, it is anticipated that the site will primarily be converted back to the pre-construction land uses. Decommissioning of the Project, including the removal of materials followed by site restoration, should be completed in approximately 12 months.

The Rancho Seco Solar II project, located in California, began decommissioning in 2020. This project was among the earliest large-scale solar facilities to go through the decommissioning process. The dismantling involved removing solar arrays and other equipment, followed by land restoration to its original state. This project serves as a notable example of the decommissioning process for early solar installations (PV Magazine USA).

7 Decommissioning Cost Estimate

7.1 OPINION OF PROBABLE DECOMMISSIONING COST

Table 7-1: Estimated Decommissioning Cost:

PV Module Removal	QUANTITY	UNITS	Unit Cost	Total	Comment
# Solar Panels -VSUN620N-156BMH-DG 620W	512,136	EA	$6.2	$3,175,243	Disassembly, Haul off-site
SUBTOTAL				$3,175,243	
Foundations Structural Removal	**QUANTITY**	**UNITS**	**Unit Cost**	**Total**	**Comment**
# Panel Support Steel Piles	94,840	EA	$15	$1,422,600	Disassembly, Haul off-site
# Panel Racks - Fixed Tilt (TERRAGLIDE POTRAIT)	13535	EA	$150	$2,030,250	Disassembly, Haul off-site
# Panel Racks - Trackers 2P (TERRATRAK)	5433	EA	$150	$814,950	Disassembly, Haul off-site
SUBTOTAL				$4,267,800	
Electrical Equipment Removal	**QUANTITY**	**UNITS**	**Unit Cost**	**Total**	**Comment**
Inverter - SUNGROW SG4400UD-MV	64	EA	$1,000	$64,000	Disassembly, Haul off-site
MV Transformers, 4.8 MVA	64	EA	$5,500	$352,000	Disassembly, Haul off-site
Tracker Motor	150	EA	$15	$2,250	Disassembly, Haul off-site
SUBTOTAL				$418,250	
Electrical Wires Removal	**QUANTITY**	**UNITS**	**Unit Cost**	**Total**	**Comment**
MV Conductor (10% removal)	225000	FT	$25	$562,500	Removal, Excavation
DC/LC Conductor	440,000	FT	$1	$440,000	Removal, Non-Excavation
SUBTOTAL				$1,002,500	
Collector Substation Removal	**QUANTITY**	**UNITS**	**Unit Cost**	**Total**	**Comment**
Circuit Breakers 34.5 kV	8	EA	$9,500	$76,000	Disassembly, Haul off-site
HV Circuit Breakers 230 kV	2	EA	$15,000	$30,000	Disassembly, Haul off-site
Substation Steel	2	LOT	$300,000	$600,000	Disassembly, Haul off-site
Foundation/Fence	2	LOT	$225,000	$450,000	Disassembly, Haul off-site
Main Power Transformers 230 KV - 34.5 kV 84/112/140	2	EA	$95,000	$190,000	Disassembly, Haul off-site
Substation Control House	1	EA	$45,000	$45,000	Disassembly, Haul off-site
Capacitor Bank (final TBD)	1	EA	$35,000	$35,000	Disassembly, Haul off-site
SUBTOTAL				$1,426,000	
Fence/land, Removal/Restoration	**QUANTITY**	**UNITS**	**Unit Cost**	**Total**	**Comment**
Fence Perimeter	191,403	FT	$1	$191,403	Disassembly, Haul off-site
Civil Site Remediation (disturbed area)	1,575	Acre	$4,500	$7,087,500	Restoration and Seeding
Storm Water Management Ponds	115	EA	$3,500	$402,500	Restoration
Mobilization, Engineering & Permitting				$255,000	Budgeted
SUBTOTAL				$7,936,403	

Summary of Cost Estimates	
PV Module Removal	$3,175,243
Foundations Structural Removal	$4,267,800
Electrical Equipment Removal	$418,250
Electrical Wires Removal	$1,002,500
Collector Substation Removal	$1,426,000
Fence/land, Removal/Restoration	$7,936,403
ESTIMATED GRAND TOTAL	**$18,226,196**

Data Sources:

1. Material List and Quantities: Based on schematic design.
2. Unit Price Values: Based on R.S. Means and typical quantities for various components.

7.2 OPINION OF PROBABLE SALVAGE VALUE COST

There should be opportunity to reclaim metal scrap value from electrical equipment. Switching equipment and collector system contain a significant amount of conductive material such as copper and aluminum. Steel structures contain a significant amount of steel. Rubble from the foundation demolition and all other materials would be sent to landfill at cost. The scrap value of the Project is presented in Table 7-2.

Table 7-2 Estimated Salvage Value:

PV Module (At: $.3/W before Removal and Hauling)	QUANTITY	UNITS	Estimated New Cost/Unit	Estimated New Total Cost	Estimated Salvage Value 10% of New Cost
# Solar Panels 620W @ $.3/W =$186	512,136	EA	$186.00	$95,257,296	$9,525,730
SUBTOTAL					$9,525,730
Foundations Structural (at:$ .20/LB after Removal and Hauling)	**QUANTITY**	**UNITS**	**Estimated Weight LB.**	**Estimated Salvage Value**	**Estimated Salvage Value**
# Panel Support Steel Piles	94,840	EA	100	$0.26	$2,465,840.00
# Panel Racks - Fixed Tilt (TERRAGLIDE POTRAIT)	13,535	EA	560	$0.26	$1,970,696.00
# Panel Racks - Trackers 2P (TERRATRAK)	5,433	EA	560	$0.26	$791,044.80
SUBTOTAL					$5,227,580.80
Electrical Equipment	**QUANTITY**	**UNITS**	**Estimated New Cost/Unit**	**Estimated New Total Cost**	**Estimated Salvage Value 20% of New Cost**
MV Transformers, 4.8 MVA	64	EA	$115,500	$7,392,000	$1,478,400
					$1,478,400

Electrical Collector Substation	QUANTITY	UNITS	Estimated New Cost/Unit	Estimated New Total Cost	Estimated Salvage Value 20% of New Cost
Circuit Breakers 34.5 kV	8	EA	$55,000	$440,000	$88,000
HV Circuit Breakers 230 kV	2	EA	$230,000	$460,000	$92,000
Substation Steel	2	LOT	$1,250,000	$2,500,000	$500,000
Foundation/Trench/Conduit/Cable*	2	LOT	$250,000	$500,000	$100,000
Main Power Transformers 230 KV - 34.5 kV 84/112/140	2	EA	$2,300,000	$4,600,000	$920,000
Substation Control House	1	EA	$960,000	$960,000	$192,000
Capacitor Bank (final TBD)	1	EA	$450,000	$450,000	$90,000
SUBTOTAL				$9,910,000	$1,982,000
Electrical Wires/cables	**QUANTITY**	**UNITS**	**Estimated New Cost/Unit**	**Estimated New Total Cost**	**Estimated Salvage Value 10% of New Cost**
MV Conductor (only 10% of total)	225,000	FT	$25	$5,625,000	$562,500
DC/LC Conductor (10% of Total)	440,000	FT	$5	$2,200,000	$220,000
SUBTOTAL					$782,500
Fence	**QUANTITY**	**UNITS**	**Estimated Weight LB.**	**Estimated Salvage Value**	**Estimated Salvage Value/Including Removal**
Fence Perimeter (1.3 lb. per square ft, 6ft height)	191,403	FT	1,492,943	$0.42	$313,518.11
Fence Post every 10 ft (9 ft length, 2.3 lb./Ft)	19,140	FT	142,644	$0.42	$29,955.24
SUBTOTAL					$343,473.35

Summary of Salvage Values Estimate	
PV Module	$9,525,730
Foundations Structural	$5,227,581
Electrical Equipment	$1,478,400
Electrical Wires	$1,982,000
Electrical Collector Substation	$782,500
Fence	$343,473
ESTIMATED GRAND TOTAL	**$19,339,684**

7.3 NET DECOMMISSIONING COST

Summary of Estimate	
Estimated Decommissioning Cost	$18,226,196
Estimated Salvage Value	$19,339,684
ESTIMATED NET COST	($1,113,488)

Note: Negative values, in parenthesis, is positive returns to the Project.

Note:

Final decision if the Estimated Salvage Value will be credited in calculating the appropriate escrow, surety, or security for the cost of the decommissioning and reclamation of the project is subject to Washington County's approval.

7.4 DECOMMISSIONING ASSUMPTIONS

To develop a cost estimate for the decommissioning of the Wolf Hills Solar Project, Timmons Group made the following assumptions and 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. We developed time and materials-based estimates considering composition of work crews. When materials have a salvage value at the end of the project life, the construction activity costs, and the hauling/freight cost are separated from the disposal costs or salvage value to make revisions to salvage values more transparent.

1. Decommissioning year is based on a 5-year initial period for the financial security. The projected life of the project is 40 years.
2. This Cost Estimate is based on the Timmons Group data request forwarded May, 2024.
3. Common labor will be used for the majority of the tasks except for heavy equipment operation. Pricing is based on local Southeast US labor rates.
4. Permit applications required include the preparation of Stormwater Pollution Protection Plan (SWPPP) and a Spill Prevention Control and Countermeasure (SPCC) Plan.
5. Road gravel removal was estimated on a time and material basis using a 16-foot width and an 8-inch thickness for the access roads. Substation aggregate is included in the substation quantities. Since the material will not remain on site, a hauling cost is added to the removal cost. Road aggregate can often be disposed of by giving to landowners for use on driveways and parking areas. Many landfills will accept clean aggregate for use as "daily cover" and do not charge for the disposal.
6. Grade Road Corridor reflects the cost of mobilizing and operating light equipment to spread and smooth the topsoil stockpiled on site to replace the aggregate removed from the road.
7. Erosion and sediment control along road reflects the cost of silt fence on the downhill side of the road and surrounding all on-site wetlands.
8. Topsoil is required to be stockpiled on site during construction, therefore this topsoil is available on site to replace the road aggregate, once removed. Subsoiling cost to decompact roadway areas is estimated as $1,000 per acre (based on previous bid prices),

and revegetation on removed road area, which includes seed, fertilizer, lime, and care until vegetation is established is $5,500 per acre. The majority of the project area is "over-seeded" since the decommissioning activities are not expected to eliminate the existing grasses and vegetation under the arrays or heavily compact the soils. Over-seeding does not include fertilizer and lime and is estimated at $5,500 per acre.

9. Fence removal includes loading, hauling, and recycling or disposal. Fences and posts weigh approximately 2.3 pounds per foot.
10. Array support posts are generally lightweight "I" beam sections installed with a piece of specialized tracked equipment. Crew productivity is approximately 240 posts per day, and the same crew and equipment should have a similar productivity removing the posts, resulting in a per post cost of approximately $15. We assume a cost of $15.00 per post to include hauling fees and contingencies.
11. A metal recycling Project (FEA Salvage and Recycling) is located in Powhatan, Virginia and is relatively close to the project site. Steel scrap pricing was acquired from www.scrapmonster.com.
12. The solar panels rated 620 watts can easily be disconnected, removed, and packed by a three-person crew at a rate we estimate at 12 panels per hour.
13. No topsoil is planned to be removed from the site during decommissioning and most of the site will not have been compacted by heavy truck or equipment traffic, so the site turf establishment cost is based on RS Means unit prices for applying lime, fertilizer, and seed at the price of per acre plus an allowance for some areas to be decompacted.
14. There is an active market for reselling and recycling electrical transformers and inverters with several national companies specializing in recycling. We have assumed a 20% recovery of these units based on field experience with used transformers as opposed to trying to break them down into raw material components.
15. The underground collection lines are assumed to be aluminum conductor.
16. Care to prevent damage and breakage of equipment, PV modules, inverters, capacitors, and SCADA will be exercised, but removal assumes unskilled common labor under supervision.

The estimated salvage values are derived from years of experience decommissioning and uprating electric substations, overhead transmission and distribution hardware and underground distribution hardware that would include but not be limited to substation and pad mounted transformers, overhead and underground conductors, poles, fencing, ground grid conductors, control housings, circuit breakers (high and medium voltage), protective relaying, and other hardware items. These individual items have high salvage value either as stand-alone components to be reused or recycled and sold as used items. These items also have a relatively high salvage value as pure scrap for steel, copper and other commodities.

For all medium voltage transformers, breakers and other items, Southeastern Transformer Company in Dunn, NC provides complete repair, upgrading and recycling and resale for all items mentioned above. Their website is: https://www.setransformer.com. They have a national presence.

For any and all recycling and upgrading, Solomon Corporation offers the same set of services for transformer repair and recycling and complete substation decommissioning services. With seven

different locations, Solomon is one of several vendors that can decommission and recycle the components as noted above. Their website is: https://www.solomoncorp.com/. Solomon Corporation is only one of many transmission and distribution recycle and decommissioning shops that do this mainly to harvest the components.

For recycling conductor, General Cable and Southwire both utilize extensive scrap procurement programs to reuse copper and aluminum conductor harvested from projects such as this one to supplement and reduce their raw material costs.

Here is the link to the General Cable program which only increases the salvage values found in this Plan: General Cable Recycling https://es.generalcable.com/na/us-can/socialresponsibility/sustainability/recycling

As for solar panels, they are in demand as salvageable items either in whole or for their raw material. According to the International Renewable Energy Agency (IRENA), more than 90% of all the materials are high grade silicon, aluminum and glass and are typically harvested to produce new panels. This is far less expensive than buying unprocessed raw materials for production.

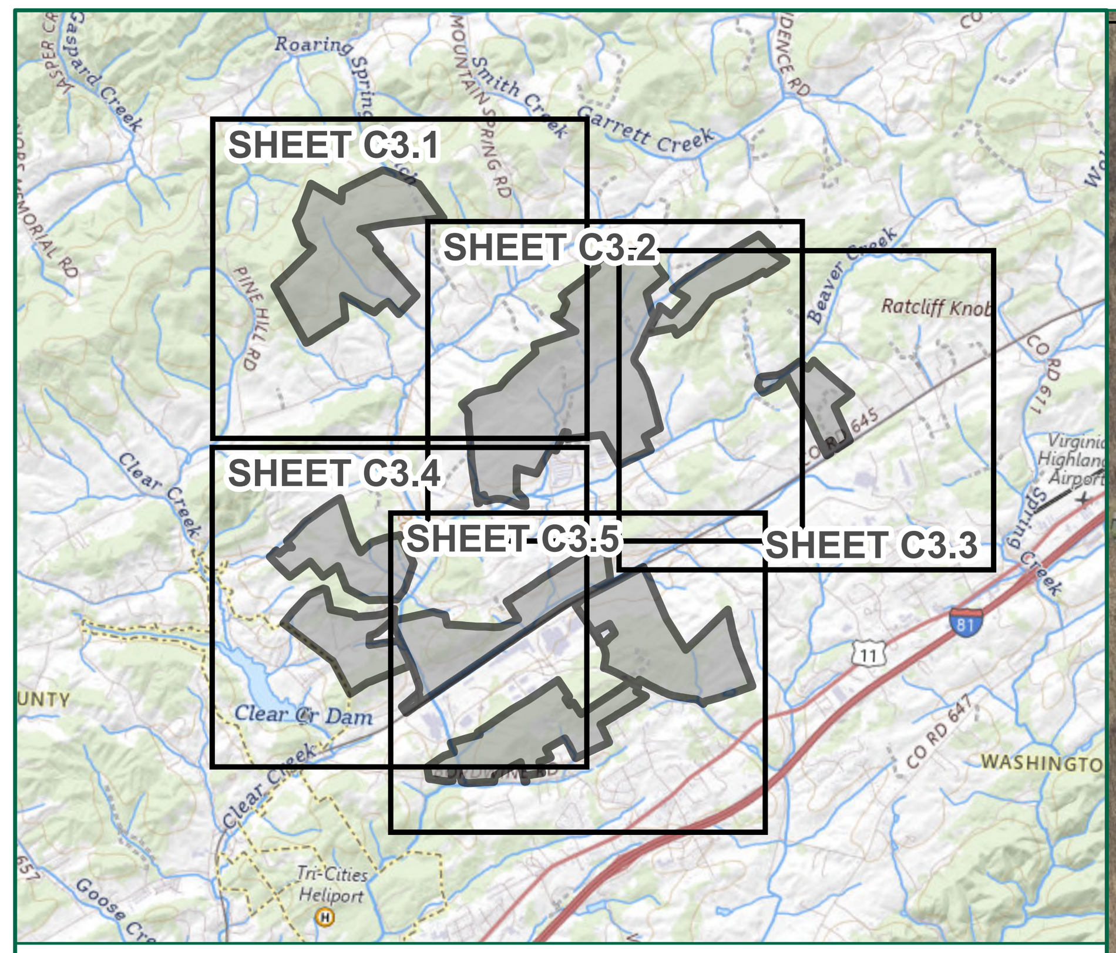
The base industry assumption is that since solar panels are expected to retain about 75% of their production capability after 40 years of use, a salvage value of 10% of original cost is a low estimate of their expected value and as we note in assumption. This considers possible technology improvements and undervalues the anticipated salvage value of the panel's raw materials. The Solar Energy Industries Association (SEIA) has an approved set of PV recycling vendors that specialize in doing this today and they can be found at: https://www.seia.org/initiatives/seia-national-pv-recycling-program.

First Solar, which has been active in the solar industry since its inception, takes solar modules and recycles 90% of the semiconductor material which is then reused in new modules. 90% of the glass product can be reused as new glass products, including panels and fiber optic cable. We can conclude that realistically the estimated 20% salvage value is low and reflects a conservative figure. Information about First Solar's recycling program is at: http://www.firstsolar.com/en/Modules/Recycling.

8 Financial Assurance

Wolf Hills will post a financial surety with Washington County as the obligee that is equal to the total cost of decommissioning the Project (decommissioning costs). Based on industry trends, the projected and actual costs of decommissioning are expected to go down over time based on improvements both to best practices in calculating these costs and the decommissioning process itself. Wolf Hills will reevaluate decommissioning costs with a qualified engineering consultant every five years during the life of the Project.

Appendix A – Site Plan



Legend

- Project Limits - 2,253 Acres
- Overall Property Limits
- Property Setbacks
- 100LF Buffer from Existing Residences
- Project Entrance
- Existing Substation
- Existing Transmission Line
- Liquified Natural Gas Pipelines
- Fence
- Single-Axis Tracker Solar Panels
- Fixed Tilt Solar Panels
- Inverter
- Main Power Transformer
- Overhead Gen-Tie Line
- Access Road
- Internal Road
- Stream
- Wetland
- Possible Sinkhole
- Proposed Vegetative Buffer
- Retained Vegetative Buffer

NOTES:

1. PROPERTY AND PARCEL DATA FROM WASHINGTON COUNTY GIS.
2. PROPERTY SETBACKS ARE 50 FEET FROM ADJACENT NON-PARTICPATING PARCELS AND 100 FEET FROM PUBLIC RIGHTS OF WAY. PROJECT WILL BE SETBACK 100 FEET FROM THE NEAREST RESIDENCE.
3. WITH THE EXCEPTION OF LIGHTING, POLES AND LINES NECESSARY TO CONNECT TO THE POWER GRID, THE HEIGHT OF THE STRUCTURES AND ARRAYS IN THE SYSTEM SHALL BE GROUND MOUNTED AND NOT EXCEED FIFTEEN (15) FEET AS MEASURED FROM GRADE AT THE BASE OF THE STRUCTURE TO THE APEX OF THE STRUTURE OR EXCEED THE MAXIMUM BUILDING HEIGHT FOR ACCESSORY STRUCTURES FOR THE ZONING DISTRICT IN WHICH THE PROJECT IS TO BE LOCATED.
4. THE FACILITY SHALL BE ENCLOSED AROUND THE PERIMETER BY A SECURITY FENCE WITH A MINIMUM HEIGHT OF SIX (6) FEET WITH AN APPROPRIATE ANTI-CLIMBING DEVICE.
5. STREAM DATA FROM THE NATIONAL HYDROGRAPHY DATASET.
6. WETLAND DATA FROM THE NATIONAL WETLAND INVENTORY.
7. SINKHOLE DATA FROM WASHINGTON COUNTY AND VA DEPARTMENT OF ENERGY.
8. AERIAL IMAGERY FROM VGIN.

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PROJECT NAME & LOCATION

WOLF HILLS SOLAR
WASHINGTON COUNTY, VIRGINIA

DATE	05/24/2024
PROJECT NUMBER	62392
PROJECT NAME	WOLF HILLS SOLAR
DESIGNED BY / DRAWN BY	M. HILL

REVISIONS

#	MM/DD/YY	DESCRIPTION

DRAWING DESCRIPTION
CONCEPT PLAN

SCALE (FEET)
0 1,000 2,000
PLANS PRINTED AS 11X17 ARE HALF SCALE

SCALE	SHEET NUMBER
1 = 1,000'	3.0

Y:\852\62392-Cat_Reedy_Solar\GIS\62392 - SPEX\62392 - SPEX.aprx

Appendix B – Recycling Plan

Catalyst intends to incorporate a module recycling program into its project decommissioning plan. Given that the solar industry is only approximately 20-25 years old and that module useful lifespans are approximately 30-35 years, module recycling programs have historically not been available to solar developers. However, in recent years, this has changed, and several companies have entered the module recycling space, including, but not limited to:

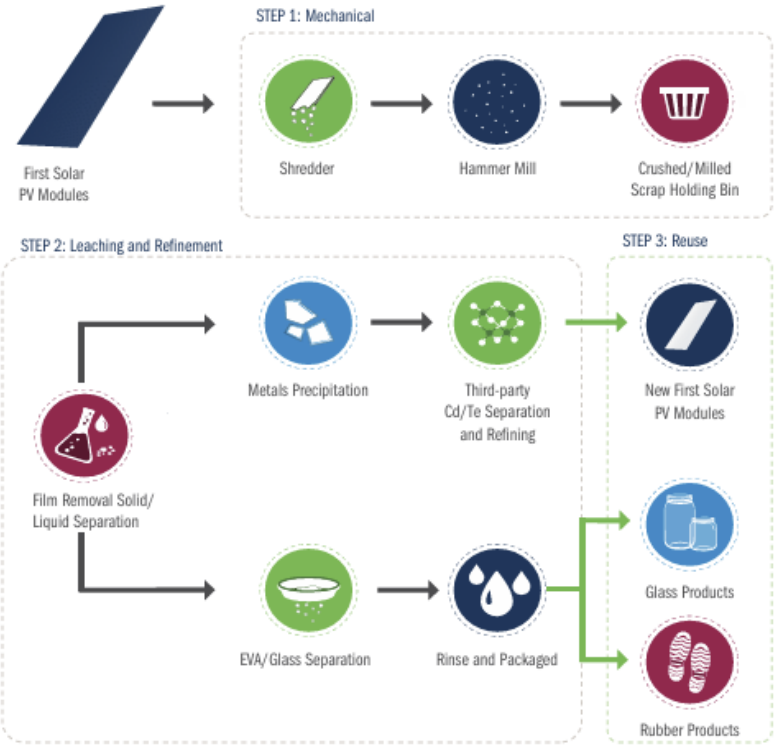
1. We Recycle Solar (https://werecyclesolar.com/)
2. ERI (https://eridirect.com/sustainability/products-we-recycle/solar-panels/)
3. METech (https://www.metechrecycling.com/)

Recycling solar modules in a safe and responsible way accomplishes two things:

1. The prevention of negative environmental impacts due to the improper disposal of modules in landfills.
2. 90% of the module is recyclable and the materials (silicon, glass, metal) could all be reused to create other products.

How are solar modules recycled?

The below picture illustrates the recycling process of a First Solar module, which is the module type that Catalyst intends to utilize for the Wolf Hills Solar Project. The First Solar modules are manufactured in Ohio and are certified to ISO 14001 for Environmental Management, ISO 9001 for Quality, and ISO 45001 for Occupational Health and Safety.



*Source: First Solar 2023 Sustainability Report

What is inside of a First Solar module?

First Solar modules are predominantly comprised of glass and aluminum and have a very small amount of silicon, which is the semiconductor material that absorbs sunlight. Silicon is inside of all electronic equipment, including your cell phone.

Item	Description	% Weight of Module
Semiconductor material	Thin-film Cadmium Telluride (CdTe)	0.12%
Laminate material	Polyolefin	2.02%
Bussing material	Copper Leaf Foil and Bus Bars	0.025%
Glass	Front (Substrate) Glass and Back (Cover) Glass	84.5%
Junction Box and Cable Assembly	Polyphenylene Housing and Halogen-Free Electrical Cables	0.56%
Frame and bars	Aluminum	12.5%
Frame adhesive	Silicon-based adhesive	0.83%

*Source: First Solar 2022 EEO-1 Report

How much does it cost to recycle a module?

Catalyst intends to use over 500,000 modules for its 262 MW-AC solar project. Today, it costs approximately $12-$24 to recycle one solar module. That is approximately $6MM-$12MM in today's dollars. Catalyst expects the $/module recycling cost to significantly decrease over time as more utility scale solar projects are decommissioned and additional companies enter the recycling industry.