Decommissioning Estimate/Plan

Beecher Road
Yorkville, IL

Date: 10/18/2022
Calculated By: CG

This Decommissioning Estimate has been prepared by New Leaf Energy in an attempt to predict the cost associated with the removal of the proposed solar facility. The primary cost of decommissioning is the labor to dismantle and load as well as the cost of trucking and equipment. All material will be removed from the site, including the concrete equipment pads, which will be broken up at the site and hauled to the nearest transfer station.

No salvage values have been assumed in this calculation.

The following values were used in this Decommissioning Estimate:

System Specifications	
Number of Modules	9,724
Linear Feet of Racking (ft)	36,465
Number of Inverters	2
Number of Transformers	2
Number of Tracker Motors	4
Electrical Wiring Length (ft)	4,094
Number of Foundation Piles	2,210
Length of Perimeter Fence (ft)	4,171
Number of Power Poles	5
Access Rd Material Volume (YD)	913
Total Disturbed Area (SF)	27,886
Total Fence Weight (lbs)	2,961
Total Racking Weight (lbs)	228,514
Total Foundation Pile Weight (lbs)	298,350

Equipment & Material Removal Rates	
Module Removal Rate (min/module)	1
Rack Wiring Rem. Rate (min/mod)	0.25
Racking Dismantling Rate (min/LF)	0.2
Inverter Removal Rate (hr/unit)	0.5
Transformer Removal Rate (hr/unit)	1
Motor Removal Rate (hr/unit)	1
Rack Loading Rate (min/LF)	0.1
Elect. Wiring Removal Rate (min/LF)	0.5
Pile Rem. Rate (piles/day)	300
Fence Removal Rate (min/LF)	1
Days req. to break up concrete pads	3
Days req. with Rough Grader	1
Days req. with Fine Grader	1
Total Truckloads Required	21
Round-Trip Dist. to Trans. Sta.(miles)	5.8
Round-Trip Time to Trans. Sta. (hr)	0.15

Labor and Equipment Costs		
Labor Rate ($/hr)	$	35.00
Operator Rate ($/hr)	$	47.00
Bobcat Cost ($/hr)	$	101.90
Front End Loader Cost ($/Day)	$	845.77
Excavator Cost ($/Day)	$	1,365.46
Trucking Cost ($/hr)	$	127.38
Backhoe Cost ($/hr)	$	101.90
Power Pole Removal Cost ($/pole)	$	1,500.00
Grader Cost ($/day)	$	1,324.70
Gravel Export Cost ($/YD)	$	8.00
Loam Import Cost ($/YD)	$	20.00
Seeding Cost ($/SF)	$	0.10
Fuel Cost ($/mile)	$	0.50

Energy Storage Decommissioning		
Number of Energy Storage Units		2
Battery Disposal Fee	$	25,000.00
Battery Loading Prep Time (hr)		32
Battery Loading Time (hr)		8

Labor, Material, and Equipment Costs

1. Remove Modules

The solar modules are fastened to racking with clamps. They slide in a track. A laborer needs only unclamp the module and reach over and slide the module out of the track.

Module Removal Rate • Total Number of Solar Modules • Labor Rate = Module Removal Cost

Total = $ 5,672.33

2. Remove Rack Wiring

The modules are plugged together in the same manner as an electrical cord from a light is plugged into a wall socket. The string wires are in a tray. A laborer needs only unplug the module, reach into the tray and remove the strands of wire.

Wire Removal Rate • Total Number of Solar Modules • Labor Rate = Rack Wiring Removal Cost

Total = $ 1,418.08

3. Dismantle Racks

Tracker module racking primarily consists of torque tubes and a driveline. These are supported on driven piles. The torque tubes and driveline unbolt from the foundation piles.

Linear feet of Racking • Rack Dismantling Rate • Labor Rate = Rack Dismantling Cost

Total = $ 4,254.25

4. Remove and Load Electrical Equipment

Electrical equipment includes transformers, inverters, and tracker motors.

(Number of Inverters • Inverter Removal Rate + Number of Transformers • Transformer Removal Rate + Number of Motors • Motor Removal Rate) • (Operator Rate + Bobcat Cost) = Electrical Equipment Removal Cost

Total = $ 1,042.30

5. Break Up Concrete Pads

Concrete pads are broken up using an excavator and jackhammer.

Number of Demolition Days • (Excavator Cost + Operator Cost) = Total Concrete Pad Removal

Total = $ 3,665.31

6. Load Racks

Once the racking has been dismantled, it will be loaded onto trucks for removal from the site. The trucking cost associated with this line item represents the additional time a truck will be needed during loading. Please see item # 13 for the cost of trucking off-site.

Linear feet of Racking • Rack Loading Rate • (Operator Cost + Front End Loader Cost + Trucking Cost) = Total Rack Removal Cost

Total = $ 16,790.61

7. Remove Electrical Wiring

Electrical wiring will be removed from all underground conduits.

Cable Length • Cable Removal Rate • (Operator Cost + Backhoe Cost) = Total Cable Removal Cost

Total = $ 5,079.97

8. Remove Foundation Piles

Foundation piles will be pulled out of the ground and loaded onto a truck to be removed from site.

(Total Number of Piles / Daily Pile Removal Rate) • (Operator Rate + Excavator Cost) = Total Pile Removal Cost

Total = $ 19,243.13

9. Remove Fencing

Fencing posts, mesh, and foundations will be loaded onto a truck and removed from site. Trucking costs included in this line item are for the removal process. Trucking to a recycling facility are included in item #13.

(Total Length of Fence • Fence Removal Rate) • (Operator Rate + Bobcat Cost + Trucking Cost) =

Total = $ 19,205.72

10. Remove Power Poles

Power poles will be removed and shipped off site.

Number of Power Poles • Pole Removal cost = Total Power Pole Removal Cost

Total = $ 7,500.00

11. Gravel Road Reclamation

Reclamation of the gravel access road will entail removing the gravel material and exporting it off site. The area will then be backfilled with loam and graded.

(Days with Rough Grader + Days with Fine Grader) • (Grader Cost per Day+Operator Cost per Day) + [Roadway Material Volume • (Gravel Export Cost + Loam Import Cost)] = Gravel Road Reclamation Cost

Total = $ 28,953.99

12. Seed Disturbed Areas

Seeding cost includes labor and materials for reseeding all disturbed areas including the reclaimed gravel road area, former electrical areas, and areas disturbed by racking foundation removal.

Seeding Cost • Disturbed Area = Total Seeding Cost

Total = $ 2,788.61

13. Truck to Transfer Station

All material will be trucked to the nearest Transfer station that accepts construction material. The nearest transfer station is Groot Recycling & Waste Services

(Total Truckloads • Roundtrip Distance • Fuel Cost) + (Total Truckloads • Round Trip Time • Trucking Cost) = Total Trucking Cost to Transfer Station

Total = $ 462.13

14. Remove and Dispose of Energy Storage Equipment

The battery units will be prepared for shipment and loaded onto a truck. A disposal fee will also be required for the disposal company to accept the batteries.

Number of Battery Units • ((Loading Prep Time • Labor Cost) + Loading Time • (Labor Rate + Bobcat Cost + Trucking Cost) + Disposal Fee) = Total Energy Storage Removal and Disposal Cost

Total = $ 56,468.40

Salvage Values | Salvage Value Not Included

Summary of Decommissioning Costs and Salvage Values

Line Item	Task	Cost
1	Module Removal	$ 5,672.33
2	Rack Wiring Removal	$ 1,418.08
3	Rack Dismantling	$ 4,254.25
4	Electrical Equipment Loading and Removal	$ 1,042.30
5	Break Up Concrete Pads	$ 3,665.31
6	Load Racks	$ 16,790.61
7	Electrical Wiring Removal	$ 5,079.97
8	Foundation Pile Removal	$ 19,243.13
9	Fence Removal	$ 19,205.72
10	Power Pole Removal	$ 7,500.00
11	Gravel Road Reclamation	$ 28,953.99
12	Seed Disturbed Areas	$ 2,788.61
13	Trucking to Transfer Station	$ 462.13
14	Energy Storage System Removal	$ 56,468.40
	Subtotal =	$ 172,544.85

Additional Item	Task	Value
Salvage Values Not Included		

Additional Item Subtotal $ -

Present Value Total = $ 172,544.85

Task	Future Value

Inflation

# of Years= 25

Inflation Rate= 2.0%

Total • (1+ Inflation Rate)^Number of Years =Grand Total

Grand Total = $ 283,078.11