

*Instructions to Worksheet User:*

\*Complete the section below titled "Project Information".

\*Complete the section below titled "Material Disposal and Recycling". Identify facilities to be used for disposal, recycling, salvage, or resale, and provide estimated mileage from the Project site to each facility.

\*Complete TABLE 1 or TABLE 2 in the tabbed worksheets by entering the relevant quantities for each decommissioning line item. If a line item is not applicable, enter a quantity of "0".

Table 1 calculates costs assuming routine removal and handling of solar panels, with no special care taken to minimize panel breakage. No resale revenue associated with refurbishment and resale of solar panels, which would require careful handling. If panels are being sent to a recycler for extraction of valuable components, this approach would not require careful handling. Salvage revenue from valuable components can be claimed if there is documentation from a credible recycling facility.

Table 2 assumes careful handling of panels and incorporates panel resale value, assuming there is documentation from a credible reseller or recycler.

\*All users must complete Table 3, which covers material transportation costs and facility tipping fees.

\*Users who are claiming salvage value for copper, aluminum, steel, or any other commodity must complete Table 4.

\*This worksheet includes standard unit costs that are valid only for solar projects of 5MW(AC) or smaller.

\*Data entry cells are highlighted in yellow; all other cells in tables are locked. If you need to request a change to a standard unit cost or a formula, provide an explanation in the appropriate cell available at the bottom of each tabbed worksheet.

**\*Enter the amount of the most recent bond value (currently in place at the time this Cost Estimate is being prepared) in the Summary Table at the bottom of this page. If the calculated results in the Summary Table show a significant change from the previous bond value, provide a narrative explanation in the NOTES cell below the Summary Table.**

Project Information			
Project Name:			
Date of this Cost Estimate:			
Date of most recent previous Cost Estimate:			
Applicant (Project Owner) Name and Business Address:			
Company Name and Address of Cost Estimate Preparer:			
County where Project is sited:			
Street address or location description:			
Tax Map:		Grid:	Parcel Number(s):

Project Components	Quantity
Solar panels	
DC output of each panel (in W)	
String inverters grouped in central location	
String inverters dispersed throughout layout	
Number of transformers	

Provide kVa rating of transformers:

Number of slab on grade concrete pads	
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Provide length, width, and depth of each pad, in feet (use as many rows as needed; larger projects may add rows)

Pad 1:

Pad 2:

Pad 3:

Other items that will need to be removed at decommissioning:	
Number of power poles	
Switchgear or other electrical equipment associated with interconnection? (Y or N)	
Ancillary structures on site? (Y or N)	

Describe any ancillary structures to be removed at decommissioning (size, use, type of construction material):

**Material Disposal and Recycling**

Type of Material	Facility Name and Address	Mileage between Project Site and Facility
Solar panel recycling, refurbishment, or resale		
Electrical equipment including inverters and transformers -- management and disposal		
Metal waste recycling		
Any other recycling -- Specify materials:		
Non-hazardous waste (including concrete debris) sent to permitted landfill		
Any additional off-site facilities where waste and excess materials will be shipped -- Specify materials:		

**SUMMARY TABLE**

Previous Decommissioning Bond Value (currently in effect)		
Newly Calculated Bond Value	\$21,422	
Percent Change	#DIV/0!	
Annual inflation rate for construction costs	2.7%	Current annual inflation rate for construction costs (ENR 20-city average of labor and materials), found at <a href="https://enrcostdata.com/cost-indexes">https://enrcostdata.com/cost-indexes</a>
Inflation factor over 5-year period	14.2%	
Inflation data accessed in [month-year]	Mar-2026	

If percent change is negative, or if the percent increase is smaller than the 5-year inflation factor, provide a narrative explanation for the effective decrease in bond value:

PE CERTIFICATION

I certify that the data entered in Exhibit A (yellow shaded cells) is complete and accurate, to the best of my knowledge, and that the calculated bond value is expected to cover all decommissioning costs at any time during the relevant five-year period, based on my professional judgment.

Name:

PE certification number:

[Redacted Name and PE certification number]

[image of PE seal]

**Table 1. Decommissioning Costs with standard panel removal, no resale or refurbishment of whole panels**

Provide Quantity for all applicable line items

Activity	Unit	Quantity	Cost Per Unit	Total	Notes
Erosion and sediment control measures	Acre		\$1,340	\$0	
Solar modules	Each		\$5.93	\$0	Assumes NO careful handling -- panels are NOT assumed to be refurbished and resold
Racking/support assemblies (incl. trackers if applicable)	Lb		\$0.10	\$0	
Steel pile/post removal	Each		\$42	\$0	
String inverter removal (in a virtual central configuration)	Each		\$400	\$0	
String inverter removal (in a dispersed configuration)	Each		\$300	\$0	
Transformer removal	Each		\$1,860	\$0	
Concrete removal	Cu Yd		\$104	\$0	
Remove subsurface collection cables (medium voltage) and backfill trenches	Ft		\$1.70	\$0	
Remove subsurface collection cables (low voltage) and backfill trenches	Ft		\$1.05	\$0	
Remove power poles and overhead transmission line	Each		\$3,087	\$0	
Access road excavation and removal	Cu Yd		\$62	\$0	
Topsoil replacement, grading, re-seeding, etc.	Acre		\$3,568	\$0	
Removal of perimeter fence	Ft		\$5.03	\$0	
Landscaping removal	Lump Sum	1		\$0	Required item for sites that may be returned to agricultural use
Ancillary structure removal	Lump Sum	1		\$0	
Removal of switchgear or any equipment installed to support interconnection that will need to be removed at decommissioning	Lump Sum	1		\$0	
<b>Estimated On-Site Decommissioning Cost</b>				<b>\$0</b>	
<b>Additional Costs</b>					
Overhead and Management (includes mobilization and permitting)				\$0	Calculated as <b>12%</b> of on-site decommissioning costs
Post-decommissioning soil testing if needed				\$5,000	
Site restoration monitoring and maintenance (establishing vegetative cover, etc.)				\$10,000	
Public road repairs				\$0	In the initial cost estimate, this can be zero and the future road repairs are assumed to be covered by the contingency. However, starting with the first update following facility construction, this line item must be updated based upon the cost of any public road repairs required as a result of construction.
Off-site transportation of all materials (see Table 3)				\$0	
Tipping fees for disposal and recycling facilities (see Table 3)				\$0	
<b>Estimated Gross Decommissioning Cost</b>				<b>\$15,000</b>	
<b>Future Gross Decommissioning Cost Estimate (includes inflation through Year 5)</b>				<b>\$17,137</b>	Includes inflation for the next 5 years of operation, applying annual inflation rate for construction costs (ENR 20-city average of labor and materials), found at <a href="https://enrcostdata.com/cost-indexes">https://enrcostdata.com/cost-indexes</a>
<b>125% of Future Gross Decommissioning Cost Estimate</b>				<b>\$21,422</b>	
<b>Revenues</b>					
Estimated panel salvage value (component recycling only, no resale value for whole panels; <b>limited to 85% of documented recycling value</b> )					Provide panel salvage assumptions and calculations (see bottom of this table); submit supporting documentation from recycling facility
Estimated Salvage Value for commodity recycling (see Table 4)				\$0	
<b>Estimated Net Decommissioning Cost</b>				<b>\$21,422</b>	
<b>Bond Calculation</b>					
<b>Estimated Future Start-up Costs (Overhead, 25% Contingency, Transportation and Tipping Fees), including inflation</b>				<b>\$0</b>	If the estimated future start-up cost total is greater than the Net Decommissioning Cost, then the start-up cost is used as the bond value. Consistent with previous cases, PPRP recommends this approach to ensure that the decommissioning bond can cover upfront costs prior to receiving salvage revenue.
<b>Calculated Decommissioning Bond Value</b>				<b>\$21,422</b>	

**Table 1. Decommissioning Costs with standard panel removal, no resale or refurbishment of whole panels**

Provide an explanation below and show calculations for estimates of revenue from recycling solar panels. Submit supporting documentation from solar module recycling facilities.

If you need to request a change to a standard unit cost or a formula anywhere in this table, provide an explanation below:

**Table 2. Decommissioning Costs with careful handling of panels**

Provide Quantity for all applicable line items

Activity	Unit	Quantity	Cost Per Unit	Total	Notes
Erosion and sediment control measures	Acre		\$1,340	\$0	
Solar modules	Each		\$9.80	\$0	Assumes careful handling to minimize breakage; panels will be refurbished and resold
Racking/support assemblies (incl. trackers if applicable)	Lb		\$0.10	\$0	
Steel pile/post removal	Each		\$42	\$0	
String inverter removal (in a virtual central configuration)	Each		\$400	\$0	
String inverter removal (in a dispersed configuration)	Each		\$300	\$0	
Transformer removal	Each		\$1,860	\$0	
Concrete removal	Cu Yd		\$104	\$0	
Remove subsurface collection cables (medium voltage) and backfill trenches	Ft		\$1.70	\$0	
Remove subsurface collection cables (low voltage) and backfill trenches	Ft		\$1.05	\$0	
Remove power poles and overhead transmission line	Each		\$3,087	\$0	
Access road excavation and removal	Cu Yd		\$62	\$0	
Topsoil replacement, grading, re-seeding, etc.	Acre		\$3,568	\$0	
Removal of perimeter fence	Ft		\$5.03	\$0	
Landscaping removal	Lump Sum	1		\$0	Required item for sites that may be returned to agricultural use
Ancillary structure removal	Lump Sum	1		\$0	
Removal of switchgear or any equipment installed to support interconnection that will need to be removed at decommissioning	Lump Sum	1		\$0	
<b>Estimated On-Site Decommissioning Cost</b>				<b>\$0</b>	
<b>Additional Costs</b>					
Overhead and Management (includes mobilization and permitting)				\$0	Calculated as 12% of on-site decommissioning costs
Post-decommissioning soil testing if needed				\$5,000	
Site restoration monitoring and maintenance (establishing vegetative cover, etc.)				\$10,000	
Public road repairs				\$0	In the initial cost estimate, this can be zero and the future road repairs are assumed to be covered by the contingency. However, starting with the first update following facility construction, this line item must be updated based upon the cost of any public road repairs required as a result of construction.
Off-site transportation of all materials (see Table 3)				\$0	
Tipping fees for disposal and recycling facilities (see Table 3)				\$0	
<b>Estimated Gross Decommissioning Cost</b>				<b>\$15,000</b>	
<b>Future Gross Decommissioning Cost Estimate (includes inflation through Year 5)</b>				<b>\$17,137</b>	Includes inflation for the next 5 years of operation, applying annual inflation rate for construction costs (ENR 20-city average of labor and materials), found at <a href="https://enrcostdata.com/cost-indexes">https://enrcostdata.com/cost-indexes</a>
<b>125% of Future Gross Decommissioning Cost Estimate</b>				<b>\$21,422</b>	

**Table 2. Decommissioning Costs with careful handling of panels**

<b>Revenues</b>	
Estimated panel resale value (limited to 85% of documented resale value)	
Estimated Salvage Value for commodity recycling (see Table 4)	\$0
<b>Estimated Net Decommissioning Cost</b>	<b>\$21,422</b>
<b>Bond Calculation</b>	
<b>Estimated Future Start-up Costs (Overhead, 25% Contingency, Transportation and Tipping Fees), including inflation</b>	<b>\$0</b>
<b>Calculated Decommissioning Bond Value</b>	<b>\$21,422</b>

Provide panel resale assumptions and calculations (see bottom of this table); submit supporting documentation from facility that refurbishes/resells panels

If the estimated future start-up cost total is greater than the Net Decommissioning Cost, then the start-up cost is used as the bond value. Consistent with previous cases, PPRP recommends this approach to ensure that the decommissioning bond can cover upfront costs prior to receiving salvage revenue.

ENR Annual Construction Cost Inflation Rate 2.7%  
 Inflation data accessed in [month-year] Mar-2026

Provide an explanation below and show calculations for estimates of revenue from resale of solar modules; submit supporting documentation.

If you need to request a change to a standard unit cost or a formula anywhere in this table, provide an explanation below:

**Table 3. Transportation and Tipping Fees**

For each type of material removed from the Project site during decommissioning, provide the amount by weight, mileage to the off-site management facility, and estimated fee the facility would charge for accepting the material (tipping fee). Refer to the list of off-site facilities entered on the first page of this worksheet.

Material	Quantity	Tons	Round Trip Mileage	Cost per mile per panel or per ton	Total Transport	Tipping Fee per ton (or per panel)	Total Tipping Fee
Solar panels			0	\$0.0071	\$0		\$0
Electrical equipment including inverters and transformers			0	\$0.28	\$0		\$0
Metal waste recycling			0	\$0.28	\$0		\$0
Any other recycling			0	\$0.28	\$0		\$0
Non-hazardous waste to landfill			0	\$0.28	\$0		\$0
Any other material			0	\$0.28	\$0		\$0
Any other material			0	\$0.28	\$0		\$0
<b>Total off-site transportation</b>					<b>\$0</b>		
<b>Total tipping fees</b>							<b>\$0</b>

Use Table 4 on the next worksheet tab to calculate any salvage value

If you need to request a change to a standard unit cost or a formula, provide an explanation below:

#### Table 4. Revenue from Commodity Salvage

Provide the weight of each type of commodity that is expected to bring in salvage revenues, thereby offsetting some decommissioning costs.

Salvage value for solar panels must be supported by documentation from a commercially viable recovery facility, stating what salvage value the facility would pay for Project panels during the relevant 5-year period. Enter the panel salvage value in **line 33 of Table 1 (for panel component recycling) or Table 2 (for panel resale).**

Material	Unit	Quantity	Salvage Value per Unit	Salvage Revenue
Copper (scrap) - metal content weight	lb		\$3.36	\$0
Aluminum (scrap)	lb		\$0.78	\$0
Steel (ferrous scrap)	metric ton		\$306.75	\$0
Any other material				\$0
<b>Total estimated salvage revenue</b>				<b>\$0</b>
<b>Discounted salvage revenue estimate</b>				<b>\$0</b>

To account for variability in commodity salvage values over time, the allowable revenue estimate includes a 15% discount

If you need to request a change to a standard unit cost or a formula, provide an explanation below: