

SOLAR DECOMMISSIONING AND RECYCLING

What is decommissioning?

Decommissioning is the process of removing solar arrays, including panels, foundation piles, mounting racks and other system components at the end of a solar project's life. This process costs money, so many local governments require that the project developer propose a plan in advance to account for these future expenses. Certain regulations, like requiring a developer to post a prohibitively expensive bond, can hinder development of solar projects that are vital to the success of our clean energy goals and beneficial to our communities. Decommissioning costs can be offset by incorporating the salvage value of project components, which zoning authorities should consider up front.



NEW Solar Panels could be made through recycling existing materials.

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Recycling

The International Renewable Energy Agency estimates that between 60 and 78 million tons of material will be generated globally by 2050 from solar panels at the end of their serviceable life. Most of this material will be glass and most of it will be recyclable and reusable, helping to assure continuity of supply as solar energy deployment grows world-wide. These materials are valuable, and the solar waste stream is comprised of components valued upwards of \$15 billion by 2050.

Converting the land to its pre-existing use

Solar installations give soil time to rest and regenerate and prevent against soil erosion, so that crops can be planted after the fact, returning agricultural land to its pre-existing use. Future crop yields can be

increased by planting pollinator-friendly native plants and flowers in and around the project footprint. Pollinators are vital to the success of food growth, so providing habitats for them on agricultural land allows crops to thrive. Further, pre-existing agricultural drain tiles remain in place during solar project operations. Repair of drain tiles potentially impacted during decommissioning is commonly required, assuring mitigation of run-off concerns.

AT END-OF-LIFE, SOLAR FARMS MAY BE:

EXTENDED

Maintain existing structures, continuing electricity production.

REPOWERED

Replace panels with newer, better technology.

DISMANTLED

Decommission panels and convert land to its prior use.

1 For more information on the retirement of PV systems, visit <https://www.nrel.gov/docs/fy21osti/78678.pdf>

2 "Valuation of Solar Generation Assets." SEIA, 22 Aug. 2013, <https://www.seia.org/research-resources/valuation-solar-generation-assets>.

3 International Renewable Energy Association. 2016. End-of-Life Management of Solar Photovoltaic Panels. http://www.irena.org/-/media/Files/IRENA/Agency/Publication/2016/IRENA_IEAPVPS_End-of-Life_Solar_PV_Panels_2016.pdf.

4 Ibid.

5 "Farmer's Guide to Going Solar." Energy.gov, Solar Energy Technologies Office, www.energy.gov/eere/solar/farmers-guide-going-solar.

6 "Wild Pollinators: Nature's Crop Insurance." Nature.org, The Nature Conservancy, 2011, www.nature.org/content/dam/tnc/nature/en/documents/nj-pollinator-brochure.pdf.

7 Ibid.