

Using solar energy produces no air or water pollution and no greenhouse gases, but does have some indirect impacts on the environment. For example, there are some toxic materials and chemicals, and various solvents and alcohols that are used in the manufacturing process of photovoltaic cells (PV), which convert sunlight into electricity. Small amounts of these waste materials are produced.

In addition, large solar thermal power plants can harm desert ecosystems if not properly managed. Birds and insects can be killed if they fly into a concentrated beam of sunlight, such as that created by a "solar power tower." Some solar thermal systems use potentially hazardous fluids (to transfer heat) that require proper handling and disposal.

Concentrating solar systems may require water for regular cleaning of the concentrators and receivers and for cooling the turbine-generator. Using water from underground wells may affect the ecosystem in some arid locations.