IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 5, March 2025

Environmental Impact of Solar Waste: Challenges and Opportunities

Prashant Gorakhanth Patil, Sonali A. Shastri, Parneet K. Chowdhary, Gaurav M. Kulkarni
Department of Electrical Engineering
Guru Gobind Singh Polytechnic, Nashik, India

Abstract: *The use of solar energy as a clean and renewable alternative to fossil fuels has grown rapidly in recent years, helping to mitigate the effects of climate change. However, this increase has brought a new problem of solar wastes. After lifetime of solar panels materials such as glass, silicon and toxic metals, which can harm the environment if not handled properly. This paper discusses the environmental problems caused by solar waste, such as pollution of soil and water and also the challenges of recycling it. It also highlights the importance of better recycling technologies, stricter regulations, and reuse of materials to make solar energy truly sustainable. The paper learns from global examples about how effective solar waste management can protect the environment and support long-term clean energy goals.*

Keywords: Solar waste, Solar Panel, toxic material in solar panel, sustainable energy sources, Waste management policies