

Solar Panel Recycling Market Size, Share, and Analysis, By Process (Thermal, Mechanical, and Laser), By Product (Monocrystalline, Polycrystalline, Thin Films PV Cells), By Shelf Life (Early Loss and Normal Loss), By Region (North America, Europe, Asia-Pacific, and Rest of the World), And Regional Forecast 2024-2034

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Abstracts

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PRODUCT OVERVIEW

Solar Panel Recycling Market is anticipated to exhibit a Compound Annual Growth Rate (CAGR) of 22% during the forecast span from 2024 to 2034. In 2023, the market size was assessed at USD 2.1 billion and is projected to reach USD 18.5 billion by the completion of 2034.

Solar panel recycling is a process to recover valuable materials from outdated or damaged solar panels to reduce waste and support sustainability. These panels are made of glass, aluminum, silicon, and various metals, that typically last 25-30 years. In addition, the rising adoption of solar energy and responsibly managing solar panel waste is becoming increasingly important. The process usually starts with dismantling the panels and then separating and processing the components for reuse. Moreover, recycling is essential to reduce environmental impacts and conserve resources, as

recycled materials can be reused in manufacturing, which lowers the demand for new raw materials. Thus, this practice supports the circular economy and ensures that the environmental benefits of solar power persist beyond the operational lifespan of solar panels. Besides, solar panel recycling is essential for the sustainable growth of the renewable energy sector.

MARKET HIGHLIGHTS

Solar Panel Recycling Market is projected to reach USD 18.5 billion over the forecast period, due to the increasing use of solar energy and the need to manage the waste from panels reaching the end of their lifespan. This growth is attributed to the strong focus on sustainability and responsible waste management practices. Additionally, improvements in recycling technologies are improving the efficiency and affordability of the process, which further boost the development of the solar panel recycling market. Alongside, leading companies are investing in innovative techniques to recover valuable materials such as silicon, silver, and aluminium from decommissioned panels. Government incentives and high awareness of the environmental benefits of recycling are motivating businesses to adopt sustainable practices. Thus, as the solar energy industry continues to expand, the recycling market will play an essential role in promoting a circular economy and lowering the environmental impact of solar energy systems.

Solar Panel Recycling Market Segments:

By Process

Thermal

Mechanical

Laser

By Product

Monocrystalline

Polycrystalline

Thin Films PV Cells

By Shelf Life

Early Loss

Normal Loss

MARKET DYNAMICS

Growth Drivers

Increasing Solar Panel Installations is Driving Growth in the Solar Panel Recycling Market

Advancements in Recycling Technologies Will Act as a Catalyst for Market Growth

Restraint

Complexity of Panel Composition in the Solar Panel Recycling Market Will Impact the Growth

Key Players

PV Cycle

Reiling GmbH & Co. KG

Veolia

ECS Refining

Recycle PV Solar

First Solar Recycling

GCL System Integration Technology Co., Ltd.

Silcontel Ltd.

Rinovasol

Canadian Solar Inc.

Trina Solar

Yingli Green Energy Holding Company Limited

SolarWorld AG

REC Group

JinkoSolar Holding Co., Ltd.

Other Prominent Players (Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis)

Global Laboratory Temperature Control Units Market is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil and Rest of Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey and Rest of Europe

Asia Pacific Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia and Rest of APAC

Middle East and Africa Market Size, Share, Trends, Opportunities, Y-o-Y

Growth, CAGR – North Africa, Israel, GCC, South Africa and Rest of MENA

Reasons to Purchase this Report

Qualitative and quantitative analysis of the market based on segmentation involving both economic as well as non-economic factors

Provision of market value (USD Billion) data for each segment and sub-segment

Indicates the region and segment that is expected to witness the fastest growth as well as to dominate the market

Analysis by geography highlighting the consumption of the product/service in the region as well as indicating the factors that are affecting the market within each region

Competitive landscape which incorporates the market ranking of the major players, along with new service/product launches, partnerships, business expansions, and acquisitions in the past five years of companies profiled

Extensive company profiles comprising of company overview, company insights, product benchmarking, and SWOT analysis for the major market players

The current as well as the future market outlook of the industry with respect to recent developments which involve growth opportunities and drivers as well as challenges and restraints of both emerging as well as developed regions

Includes in-depth analysis of the market of various perspectives through Porter's five forces analysis

Provides insight into the market through Value Chain

Market dynamics scenario, along with growth opportunities of the market in the years to come

3-month post-sales analyst support.

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