

# Concentrated Photovoltaic Market By Concentration levels (High and Low), By Technology (Refractor and Reflectors), By Application (Utility-Scale, Commercial, and Others) & By Geography- Global Trends and Forecast to 2019

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# **Abstracts**

This report estimates the concentrated photovoltaic market in terms of value. The global concentrated photovoltaic market is segmented based on their concentration levels, which include high, medium, and low. The market is further segmented on the basis of regions such as Asia-Pacific, Europe, the Middle East & Africa, and Americas as well as on the basis of technologies such as refractors and reflectors. This has been further split into major countries for the respective geographies.

The global concentrated photovoltaic market is witnessing a strong growth due to the awareness of renewable energy resources in Asia-Pacific the Middle East and Africa, Europe, and Americas. The increase in the importance of renewable energy resources and high efficiency output, with low cost, in the concentrated photovoltaic market stream is one of the key drivers of this market.

We have used various secondary sources such as encyclopedias, directories, and databases to identify and collect information that was useful for the extensive commercial study of the global concentrated photovoltaic market. The primary sources, experts, manufacturing organizations, service providers, and end-users from the industry, have all been interviewed to obtain and verify critical information as well as to assess the future prospects of the concentrated photovoltaic market.

We have also profiled the leading players of this industry, along with their recent developments and other strategic industry activities. Some of these include: Amonix



(U.S.), Soitec (France), Isofoton (U.S.), Semprius (U.S.), Solar Junction (U.S.), SunPower Corporations (U.S.), Suncor (U.S.), SolarSystems (Australia), Zytech Solar (Spain), Magpower (Portugal), and Ravano Green Powers (Italy).

This report also touches upon various important aspects of the market. These include analysis of the value chain, cost-break up analysis, drivers, restraints, burning issues, winning imperatives, opportunities, Porter's Five Forces model, and the competitive landscape. In addition to this, 11 key players of this market have also been profiled.



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# **About**

# Market investment analysis

This section of the report presents a brief market investment analysis for any company/organization to invest in the concentrated market, analyzing the major profactors and barriers for investments in this industry.

Before going any further, a few recent investments over the last four years have been analyzed to gain historical investment trend insights. The table below shows that the industry has experienced huge investments incorporated by any leading industry player. It is expected that the investments will continue to increase in the coming years globally.

The main factor behind the rising number of investments is the market's growth rate. The concentrated photovoltaic market is experiencing a decent growth rate, and it is expected to have higher growth rate in the coming years, which makes this an attractive market for investors. The rise in the number of investments shows that the industry players are increasing their capacity and are looking to expand in various regions. The trend shows that huge agreements and strategic investments are performed by major players in the CPV market.

## **Approach**

This research study involved the usage of extensive secondary sources: directories, including databases such as U.S. DOE, IEA, Energy News, SEIA, EPIA, Hoovers, Bloomberg, Business Week, Factiva, One-Source, and others to identify and collect information that would be useful for this extensive technical, market-oriented, and commercial study of the global concentrated photovoltaic market. The primary sources are mainly several industry experts from core and related industries and preferred suppliers, manufacturers, distributors, administrators, solution providers, technology developers, alliances, and standards and certification organizations from companies and organizations related to all the segments of this industry's value chain. All the primary sources were interviewed to obtain and verify critical qualitative and quantitative information as well as to assess future prospects.

## **History & Evolution**

In 1839, French physicist Alexandre Edmond Becquerel discovered the photovoltaic



effect, a physical phenomenon allowing light to convert into electricity. While experimenting with metal electrodes and electrolyte, the physicist discovered that conductance rises with illumination. In 1963, Sharp Corporation developed the first photovoltaic module from silicon solar cells.

Concentrated photovoltaic systems, using a combination of trackers and concentrator systems (lenses and mirrors) to increase solar yield and electricity production were commercialized in 2008.

Concentrated photovoltaic, the latest product addition to the solar power sector, uses inexpensive material such as glass mirrors or plastic lenses to capture sunlight and focuses it on small photovoltaic cells. Concentrated photovoltaic are generally made using high efficiency multi-junction PV solar cells. They use less solar cell material and increase power output while reducing the number and size of solar cells. Currently, the highest efficiency offered byconcentrated photovoltaic is ~ XX %, relatively higher than concentrated solar power which has conversion efficiency of ~ XX % and significantly higher than that of solar photovoltaic. Though the evolution of concentrated photovoltaic systems dates back to the 1970s, however, concentrated photovoltaic was launched commercially in the global market recently.

## Asia-Pacific region dominates the market for types

In 2013, high concentration photovoltaic market was worth \$ XX million, which is expected to reach \$ XX million by 2019. The major countries to drive the concentrated photovoltaic market in this region are China, Taiwan, and Australia.

The concentrated photovoltaic market is emerging as a potential renewable energy. With the largest CPV plant and many other projects under the pipeline in Asia-Pacific, this region is expected to lead the market throughout the period under study. In 2013, Asia-Pacific dominated the global concentrated photovoltaic market with XX % of the total share. The largest concentrated photovoltaic installation in China in 2013 and upcoming projects drove the market growth in this region. The major countries for concentrated photovoltaic were China, Australia, and Taiwan. The Americas held XX % of the total market share for concentrated photovoltaic in 2013, followed by Europe with a market share of XX % in the same period. The Middle East and Africa held a share of XX % in the global concentrated photovoltaic market.



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