

# Renewable Energy Technologies Market Report 2023: Industry Trends, Demand, Growth Rate and Forecast By 2030

*Renewable energy technologies convert the energy that is collected from renewable sources of energy such as the Sun, wind waves, and geothermal energy.*

BURLINGAME, CALIFORNIA, UNITED STATES, December 7, 2023

/EINPresswire.com/ -- The Renewable Energy Technologies Market is estimated for 2023 for the forecast period 2023-2030, as highlighted in a new report published by Coherent Market Insights.



Global Renewable Energy Technologies Market Analysis

## Market Overview:

Renewable energy technologies harness naturally occurring energy sources like solar, wind, hydro, geothermal and bioenergy to produce electricity and useful heat. They include solar panels, wind turbines, hydroelectric generators, geothermal power plants and biomass facilities that provide clean sources of energy to homes, businesses and utilities.

## Market Dynamics:

The renewable energy technologies market is driven by rapidly depleting fossil fuels reserves and stringent government regulations regarding carbon emissions. According to the report, global consumption of fossil fuels is expected to grow by 1% annually between 2020 and 2030. However, reserves are limited and extraction is becoming increasingly challenging and costly. Furthermore, excessive reliance on fossil fuels is contributing to global warming. To reduce carbon footprint, many countries have implemented renewable portfolio standards that mandate the percentage of electricity that must come from renewable sources by a certain date. This is positively impacting the demand for renewable energy technologies. Another major driver is technological advancements that have made renewables more efficient and cost-effective.

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Top Key Players are Covered in this Report:

- Innergex Renewable Energy Inc
- Infigen Energy
- Goldwind
- First Solar Inc.
- Aventine Renewable Anwell Technologies Ltd.
- SunPower Corporation
- Yingli Green Energy Holding Co LTD.
- Vestas Wind Systems A/S
- SMA Solar Technology
- AG
- Ocean Power Technologies Inc.

Detailed Segmentation

By Energy Type:

- Solar
- Wind
- Tidal
- Geothermal
- Hydroelectric
- Others

By Application:

- Residential
- Non-Residential
- Others

Key Region/Countries are Classified as Follows:

- » North America (U.S., Canada, Mexico)
- » Europe (Germany, U.K., France, Italy, Russia, Spain, Rest of Europe)
- » Asia-Pacific (China, India, Japan, Singapore, Australia, New Zealand, Rest of APAC)
- » South America (Brazil, Argentina, Rest of SA)
- » Middle East & Africa (Turkey, Saudi Arabia, Iran, UAE, Africa, Rest of MEA)

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## Renewable Energy Technologies Market Drivers, Restraints, Opportunities, and Trends

### Rising Concerns about Climate Change is Driving Adoption of Renewable Energy Technologies

There is a growing global consensus that climate change poses a severe threat to the environment and human civilization. The consequences of rising temperatures such as extreme weather events, rising sea levels, wildfires, droughts etc. are already being felt across the world. These alarming signs have prompted governments and private entities to take urgent actions to transition away from fossil fuels to renewable sources of energy like solar, wind, hydro and biomass. Countries have committed to ambitious emission reduction targets under the Paris Agreement to keep global warming well below 2°C. Transitioning to renewable energy technologies is seen as crucial to meet these climate goals as they do not produce greenhouse gas emissions. Growing environmental awareness among general public and corporations is also driving demand for green and sustainable energy solutions.

### High Upfront Capital Costs pose Challenge for Widespread Adoption of Renewable Technologies

While the operational costs of renewable energy technologies like solar panels and wind turbines are relatively lower compared to fossil fuels, their upfront capital costs remain a major barrier for universal adoption. Setting up large-scale solar or wind power projects requires huge investments which take years to pay off. The high initial costs of infrastructure like solar parks or wind farms act as a deterrent for consumers and businesses considering solar rooftops or procurement of green power. Further, energy storage solutions which can help overcome the intermittency issue of renewables like solar are still expensive. The price sensitivity of consumers and limited fiscal incentives/ subsidies in some regions also pose challenges. Unless the upfront capital costs come down significantly through economy of scale and innovative business models, renewables may struggle to achieve grid parity with conventional sources in the short term future.

### Energy Storage Advances Provide Tremendous Opportunity for Renewable Energy Growth

One of the major barriers to large scale integration of renewable energy has been the issue of intermittency as sources like solar and wind are not constant. However, rapid technological advances in cost-effective energy storage solutions are opening up huge opportunities. Lithium-ion battery costs have declined substantially, while new technologies like vanadium redox flow batteries and zinc hybrid cathode batteries show promise. There is a growing market for battery storage to be paired with both residential and commercial & industrial solar installations. Further, utility scale battery storage is enabling renewable power to be available round the clock. Energy storage not only helps optimize renewable energy usage but also creates opportunities for ancillary revenue streams through applications like frequency regulation in the grid.

Developments in green hydrogen production using renewable electricity also open up opportunities for long term energy storage and utilization across sectors.

## Continued Decline In Renewable Energy Technology Costs To Boost Their Competitiveness And Uptake

One of the most significant trends in renewable energy over the last decade has been the exponential decline in technology costs. According to the International Renewable Energy Agency (IRENA), the global weighted average levelized cost of electricity (LCOE) from utility-scale solar PV fell by 82% between 2010-2019 and that of onshore wind power fell by 46%. The costs are expected to continue their downward trajectory with further economies of scale, technological improvements, competitive supply chains and standardization. Solar module prices and installation costs have declined by over 70% from 2010 levels. Similar cost reductions have been witnessed in other renewable technologies like offshore wind, hydropower, geothermal and concentrating solar power. This ongoing cost-competitiveness of renewables relative to fossil fuels without subsidies is a major positive trend. As prices approach grid parity in more and more markets globally, renewables uptake is bound to accelerate rapidly this decade.

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The report answers a number of crucial questions, including:

- Which companies dominate the global Renewable Energy Technologies market?
- What current trends will influence the market over the next few years?
- What are the market's opportunities, obstacles, and driving forces?
- What predictions for the future can help with strategic decision-making?
- What advantages does market research offer businesses?
- Which particular market segments should industry players focus on in order to take advantage of the most recent technical advancements?
- What is the anticipated growth rate for the Renewable Energy Technologies market economy globally?

Some of the Major Points of TOC cover:

### Chapter 1: Techniques & Scope

- 1.1 Definition and forecast parameters
- 1.2 Methodology and forecast parameters
- 1.3 Information Sources

### Chapter 2: Latest Trends Summary

- 2.1 Regional trends
- 2.2 Product trends
- 2.3 End-use trends
- 2.4 Business trends

## Chapter 3: Industry Insights

- 3.1 Industry fragmentation
- 3.2 Industry landscape
- 3.3 Vendor matrix
- 3.4 Technological and Innovative Landscape

## Chapter 4: Renewable Energy Technologies Market, By Region

## Chapter 5: Company Profiles

- 5.1 Company Overview
- 5.2 Financial elements
- 5.3 Product Landscape
- 5.4 SWOT Analysis
- 5.5 Systematic Outlook

## Chapter 6: Assumptions and Acronyms

## Chapter 7: Research Methodology

## Chapter 8: Contact (Continue . . .)

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