

Renewable Energy Market Study

About Us

Straits Research Pvt Ltd is a leading market research firm offering comprehensive insights on market demand, trends, growth prospects and regional analysis. With over 35 years of combined experience, we provide premium qualitative insights on consumer preferences, regulatory landscape, and technological advancements along with quantitative insights on industry market size, global economic scenario and revenue opportunities. These reports are backed by high-quality data sourced from primary sources and large secondary databases. With analyst perspectives and insights included in every report, Straits Research delivers comprehensive market intelligence and detailed analysis to help clients make informed decisions.

Table of Content

Market Summary

- Market Overview
- Market Trends

Segment Overview

- By Type
- By End-User

Regional Overview

Company Profiles

ABB

Acconia S.A.

EDF Renewables

Enel Spa

GE Vernova

Innergex

Invenergy

Schneider Electric

Siemens Gamesa

Suzlon Energy Ltd.

Iberdrola, S.A.

Xcel Energy, Inc.

NextEra Energy

Vestas Wind Systems A/S

Others

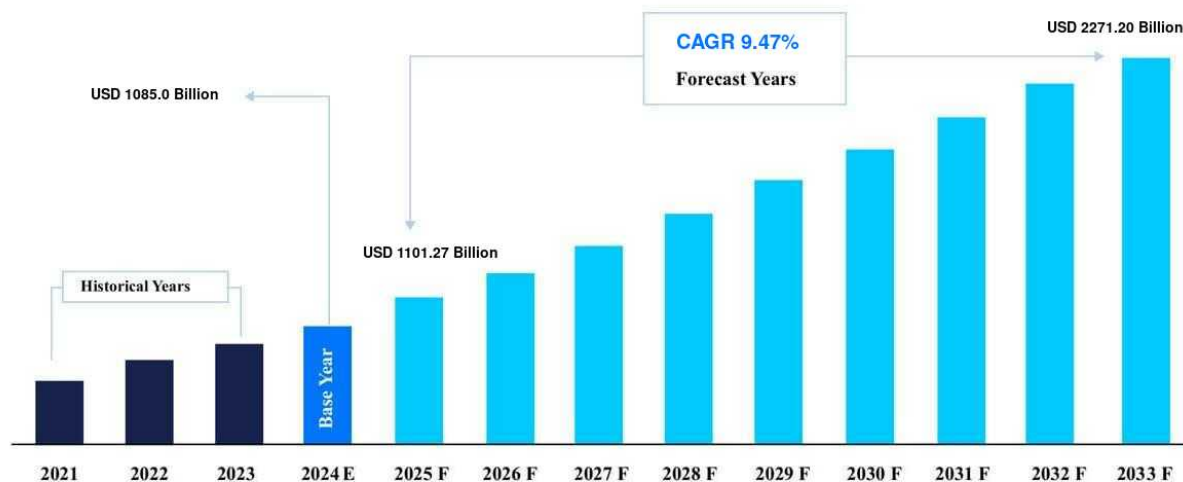
Note: More company profiles available on full reports.

Top 5 Company Market Share



Total
22%

Top 5 company market share



Source: Straits Research

Emerging Countries

United States

Germany

China

Emerging Companies

ABB

Acconia S.A.

EDF Renewables

Market Trends

Growth Trends

- Increase in the adoption of renewable energy
- Shift towards clean and green energy, minimizing dependence on fossil fuels
- Increased investments in the renewable energy sector
- Emerging technological innovations enhancing energy efficiency
- Increasing government policies and regulations promoting renewable energy sources

Factors considered while calculating market size and share

- Global energy requirements and use
- Energy policies and regulations by government and regulatory bodies
- Number of companies in the market and their market share
- Current and future price trends in the sector
- Technological advancements
- Investment in the renewable energy sector
- Nature and level of competition in the renewable energy sector

Key Market Indicators

- Annual growth rate of renewable energy sector
- Market value of the renewable energy sector
- Overall consumption and production of renewable energy
- Regional distribution of renewable energy market
- Market penetration of renewable energy
- Growth rate of renewable energy industries like solar, wind, geothermal, etc.

High cost associated with sustainable energy sources

The significant costs linked to sustainable energy technology present a major barrier to its widespread adoption. Technologies like solar panels, wind turbines, and geothermal plants require substantial initial capital, often exceeding the costs associated with conventional fossil-fuel-based power generation.

These costs encompass not only the technology itself but also ongoing maintenance, skilled personnel, land acquisition, and grid integration, which collectively raise the overall expenses and slow market growth.

- According to the Solar Spectrum of New India, nearly 90% of survey respondents highlighted the need for specialized skills in solar panel installation, and 59% expressed concern over high initial installation costs.

These financial and operational demands can make sustainable power less accessible, particularly in regions with limited funding, thus restricting broader market expansion.

Market Trends

Increasing demand for sustainable energy in power generation

The rapid increase in energy demand, driven by global population growth and urbanization, is significantly boosting the renewable power market. Expanding industrial, commercial, and residential sectors, especially in emerging economies, require scalable and reliable energy sources. Renewable power, with its reduced carbon footprint, is becoming essential in the power generation mix as countries focus on lowering emissions.

Unlike traditional power sources, renewable plants like wind and hydroelectric are less vulnerable to large-scale outages due to their dispersed installations, reducing the risk of complete power cuts during emergencies.

- According to the International Energy Agency (IEA), global sustainable electricity capacity is expanding at an unprecedented pace, targeting a tripling of capacity by 2030, as committed by governments at the COP28 climate conference.

Technological innovations in renewable energy storage

Technological advancements in renewable energy storage are unlocking new growth avenues for the global market, addressing the primary challenge of intermittency in sources like solar and wind. Innovations in storage solutions, including battery technologies and grid storage systems, enable efficient energy storage and improved grid stability, making sustainable power more reliable and widely applicable.

- For instance, in 2024, the world's largest lithium-ion battery system, the Moss Landing Energy Storage Facility in California, increased its capacity to store and dispatch up to 1,200 MWh, capable of powering around 225,000 homes for four hours.

Additionally, advancements in flow batteries and pumped hydro storage are allowing energy to be stored for longer durations, supporting industrial applications and peak demands. These innovations not only increase the feasibility of renewable adoption in large-scale projects but also reduce dependency on fossil fuels, positioning sustainable power as a stable, scalable power solution.

Market Segments

By Type

Hydropower accounts for around 40-45% of the global renewable energy market by type, making it the largest contributor. Its dominance comes from its established infrastructure and ability to produce consistent energy over long periods. With a long history of use and reliable performance, hydropower continues to be a key player in renewable energy production worldwide.



Hydropower

40-45%

By End-User

The residential sector holds a 30-35% share of the renewable energy market, largely driven by the increasing adoption of solar panels in homes, especially in regions like North America and Europe. As homeowners look for ways to reduce energy bills and lessen their environmental impact, solar energy has become a popular choice for residential power generation.



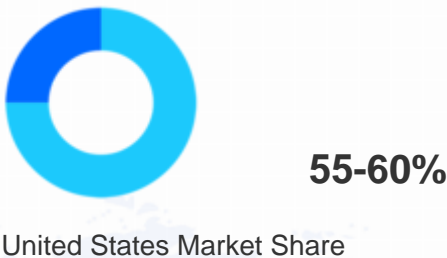
Residential Sector

30-35%

Regional Overview

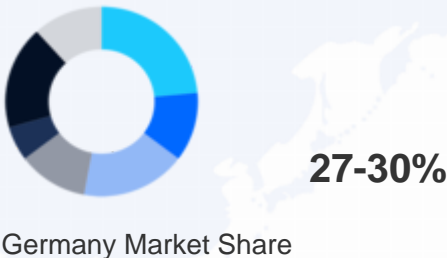
North America

North America makes up 30% of the global renewable energy market, with the United States contributing about 55-60% of the region's share. Key drivers include significant investments in wind and solar, federal and state incentives, corporate renewable energy goals, and advancements in energy storage.



Europe

Europe accounts for 35% of the global renewable energy market, with Germany contributing about 27-30% of the region's share. Key drivers include strong renewable energy policies, ambitious decarbonization targets, and leadership in wind and solar energy.



APAC

The Asia-Pacific region, spearheaded by China, leads the global renewable energy market, especially in solar and wind power. China is the top producer of solar panels and wind turbines, while India and Japan are quickly expanding their renewable energy capacity.



Regional Overview

Middle East and Africa

The Middle East and Africa are growing players in the renewable energy sector, with South Africa leading the way and representing a significant portion of the region's renewable capacity.



XX%

South Africa Market Share

LATAM

Latin America boasts strong renewable energy potential, led by Brazil's dominance in hydropower and growing wind and solar capacity. Other countries are also advancing in bioenergy and geothermal, positioning the region for future expansion in clean energy.



XX%

Brazil Market Share

Company Profiles

Companies	Websites	Headquarters	Establisheds	Key Executives	Revenues
ABB	http://www.abb.com/	Zurich, Switzerland	1988	Björn Rosengren (CEO)	\$29.5 Billion
Acconia S.A.	http://www.acciona.com/	Madrid, Spain	2005	José Manuel Entrecañales (Chairman & CEO)	€8.1 Billion
EDF Renewables	http://www.edf-re.com/	Paris, France	2004	Bruno Bensasson (Chairman & CEO)	€4.8 Billion
Enel Spa	http://www.enel.com/	Rome, Italy	1962	Francesco Starace (CEO)	€42.5 Billion
GE Vernova	http://www.ge.com/	Boston, Massachusetts, USA	1892	Scott Strazik (CEO)	\$18.1 Billion

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