

Renewables Outpace Fossil Fuels: The Transformation of the U.S. Clean Energy Sector

The market is booming, fueled by record solar/wind growth, grid modernization, EV adoption, and storage solutions, aligning with sustainability goals.

WILMINGTON, DE, UNITED STATES, March 11, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research titled, "[U.S. Clean Energy Market](#) Type, and Application: Country Opportunity Analysis and Industry Forecast, 2024–2033." The U.S. clean energy market was valued at \$85.7 billion in 2023, and is projected to reach \$198.2 billion by 2033, growing at a CAGR of 8.7% from 2024 to 2033. The U.S. clean energy market expansion is profoundly influenced by policies and regulations enacted at both national and international levels. Governments worldwide have implemented measures to promote the adoption of clean energy technologies as part of broader efforts to combat climate change and reduce greenhouse gas emissions. Policies such as renewable energy mandates, feed-in tariffs, tax incentives, and carbon pricing mechanisms foster investments in clean energy projects and create a favorable market environment. In addition, international agreements such as the Paris Agreement provide a framework for global cooperation on climate action, further incentivizing the transition to clean energy sources.

Download PDF Brochure: <https://www.alliedmarketresearch.com/request-sample/A325461>

Despite the rapid growth of renewable energy sources such as solar and wind power, intermittent generation remains a significant challenge for the U.S. clean energy market. The variability of sunlight and wind patterns leads to fluctuations in electricity supply, posing grid stability concerns. Energy storage technologies, such as batteries, pumped hydro storage, and thermal energy storage, are essential for mitigating intermittency by storing excess energy during periods of high generation and releasing it when demand is high. However, the inflated costs and limited scalability of current storage solutions present barriers to widespread adoption of solar and wind power generation, restraining the full potential of renewable energy integration into the grid.

Green building technologies represent a significant opportunity for the growth of the U.S. clean energy market. The construction and operation of buildings account for a substantial portion of global energy consumption and carbon emissions. Green building technologies aim to reduce energy consumption, improve indoor air quality, and minimize environmental impact throughout

the building's lifecycle. Strategies such as passive solar design, energy-efficient HVAC systems, green roofs, and smart building automation systems are incorporated into new construction and retrofitted into existing buildings. As sustainability becomes a priority for developers, investors, and occupants, the demand for green building technologies is expected to grow, driving innovation and market expansion in this sector.

Connect To Analyst @ <https://www.alliedmarketresearch.com/connect-to-analyst/A325461>

The U.S. clean energy market is segmented into type, and application. By type, the market is divided into solar energy, wind energy, geothermal energy, biomass, and others. By application, the market is segregated into residential, commercial, and industrial.

Key Growth Factors Driving the U.S. Clean Energy Market

The U.S. clean energy market is expanding rapidly, driven by technological advancements, policy support, and increasing demand for sustainable energy solutions. Here are the key factors fueling its growth:

1 Strong Government Policies & Incentives

- The Inflation Reduction Act (IRA) provides tax credits and funding for renewable energy projects.
- Federal and state-level renewable portfolio standards (RPS) drive clean energy adoption.
- Expansion of clean energy grants, subsidies, and investment tax credits (ITCs).

2 Corporate & Consumer Demand for Sustainability

- Businesses are committing to 100% renewable energy and net-zero targets.
- Increasing consumer preference for green electricity plans and electric vehicles (EVs).

3 Grid Modernization & Energy Storage Innovations

- Smart grid investments enhance reliability, efficiency, and renewable integration.
- Growth in battery storage and long-duration energy storage (LDES) to support intermittent renewables.

4 Expansion of Offshore & Onshore Wind Energy

- Major offshore wind projects along the East Coast and West Coast are in development.
- Texas, Iowa, and Oklahoma lead in onshore wind power production.

5 Growth in Green Hydrogen & Power-to-X Technologies

- Hydrogen is gaining traction as a clean fuel for heavy industries and transportation.
- Power-to-X (P2X) solutions help convert excess renewable energy into hydrogen and synthetic fuels.

6 Electrification & EV Adoption

- Surge in electric vehicle (EV) sales and charging infrastructure expansion.

- Increased electrification of industries, homes, and transportation systems.

In 2023, the wind energy segment held the highest market share, accounting for nearly one-third of clean energy revenue. This is due to its scalability, reliability, and abundant resource availability. Wind turbines generate electricity on a large scale, offering a cost-effective solution. Geothermal energy, with a projected 9.8% CAGR from 2024 to 2033, is growing rapidly due to its continuous, reliable power generation, minimal environmental impact, and scalability. It offers a sustainable and accessible source of electricity and heat globally.

For Purchase Inquiry: <https://www.alliedmarketresearch.com/us-clean-energy-market/purchase-options>

In 2023, the industrial segment held the largest market share in the U.S. clean energy market, accounting for over half of revenue. This growth is attributed to increased demand for emergency backup power in industrial buildings, which has led to the use of renewable energy sources like wind, solar, geothermal, and biomass. The commercial segment is projected to experience the highest CAGR of 9.1% from 2024 to 2033, driven by infrastructure development in developing countries and a shift towards sustainable power generation.

The major players operating in the U.S. clean energy market include Vestas Wind Systems A/S, Siemens A.G., GE Vernova, NextEra Energy, First Solar, Inc., JA Solar, First Gen Corporation, Terra Gen LLC, Calpine, and DTE Energy. Additional growth strategies such as expansion of production capacities, acquisition, and partnership in the development of the innovative products from manufacturers have helped to attain key developments in the U.S. clean energy market trends.

Key Findings of the Study:

- On the basis of type, the wind energy segment will dominate the market in 2025.
- On the basis of application, the commercial segment is the fastest-growing segment with a CAGR of 9.1% during the forecast period.

David Correa

Allied Analytics LLP

+1 5038946022

help@alliedmarketresearch.com

Visit us on social media:

[Facebook](#)

[X](#)

[LinkedIn](#)

[YouTube](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/792880523>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something

we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.