

# Clean Energy Transition Market to Hit \$3.7 Trillion by 2028, Growing at 9.4% CAGR

□ *Global Clean Energy Transition Market Accelerates with Renewables, Electrification & Hydrogen*

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According to a new report published by Allied Market Research, the global [clean energy transition market](#) size was valued at \$2.4 trillion in 2023 and is

projected to reach \$3.7 trillion by 2028, growing at a CAGR of 9.4% from 2024 to 2028. The rapid adoption of renewable energy, electrification, and hydrogen-based technologies is reshaping global energy systems, creating new opportunities across industries.

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Clean energy transition market to hit \$3.7T by 2028, driven by renewables, electrification, and hydrogen innovations worldwide.”

*Allied Market Research*

The clean energy transition represents the global shift from fossil fuels to low-carbon, [sustainable energy sources](#). It is driven by the urgent need to reduce greenhouse gas emissions, enhance energy security, and achieve climate targets. Governments, corporations, and consumers alike are investing in renewables, smart grids, energy efficiency, and green infrastructure to build a resilient, sustainable energy future.

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## Key Market Drivers

### □ Surge in Renewable Energy Deployment

The increasing adoption of solar, wind, hydropower, and bioenergy is the backbone of the clean energy transition. According to the International Energy Agency (IEA), renewable energy is set to become the largest source of electricity generation by the mid-2020s. The scalability, falling

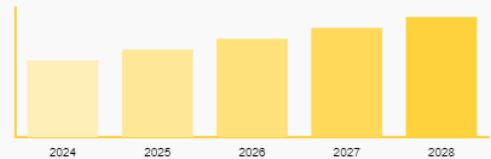
## Report Insights

Market was valued at  
**\$2.4 Trillion**  
2023

Projected to reach  
**\$3.7 Trillion**  
2028

Growing at a CAGR  
**9.4% From**  
2024-2028

CAGR 9.4%



**Clean Energy Transition Market**  
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costs, and sustainability of renewables make them essential for meeting rising energy demand.

#### □ Electrification of Transportation & Industries

Electrification is transforming high-emission sectors such as transport, heating, and manufacturing. Electric vehicles (EVs), electric heat pumps, and industrial electrification are reducing reliance on fossil fuels while lowering emissions. This trend is reinforced by government incentives and stricter emission regulations.

#### □ Energy Storage & Smart Grids

Energy storage systems, especially advanced batteries, are critical for balancing renewable energy variability. Combined with smart grid technologies, they enable real-time energy monitoring, demand response, and grid flexibility, ensuring a more reliable and resilient power system.

#### □ Global Climate Commitments

International agreements such as the Paris Agreement are pushing countries to accelerate their [clean energy investments](#). Policies promoting carbon neutrality and net-zero targets are opening up new opportunities for renewable projects, hydrogen infrastructure, and energy efficiency programs.

#### Opportunities in the Clean Energy Transition Market

**Hydrogen Economy Expansion** – Hydrogen is emerging as a clean fuel alternative for transportation, heavy industries, and power generation. Green hydrogen, produced via renewable-powered electrolysis, presents vast growth potential.

**Technological Innovations** – Advances in solar photovoltaics, offshore wind turbines, and next-gen energy storage are reducing costs and improving efficiency. This makes clean energy projects more competitive with traditional fossil fuels.

**Sustainable Infrastructure Development** – Governments are increasingly investing in green infrastructure, from renewable power plants to EV charging networks, creating opportunities for investors and technology providers.

**Corporate Sustainability Goals** – Businesses worldwide are adopting renewable power purchase agreements (PPAs) to meet net-zero goals, fueling demand for clean energy solutions.

Procure This Report (340 Pages PDF with Insights, Charts, Tables, and Figures):

<https://www.alliedmarketresearch.com/clean-energy-transition-market/purchase-options>

## Segmentation Analysis

The clean energy transition market is segmented into type, end use, and region:

### By Type

Renewable Energy – Includes wind, solar, hydropower, and bioenergy, which dominate global investments.

Wind Power – Offshore and onshore wind projects are expanding rapidly due to technological advancements.

Solar Power – Falling costs of solar PV panels are driving mass adoption worldwide.

Bioenergy – Offers a sustainable option for electricity and heating.

Hydropower – Remains a key contributor in countries with abundant water resources.

Energy Efficiency – Focus on smart grids, advanced appliances, and building efficiency systems.

Electrification – Expanding use in EVs, heating, and manufacturing processes.

Hydrogen – Growing adoption of hydrogen fuel cells and infrastructure development.

Others – Geothermal, tidal, and emerging technologies.

### By End Use

Industrial – High demand for electrification, renewable power, and hydrogen solutions.

Commercial – Adoption of rooftop solar, energy efficiency systems, and smart grids.

Residential – Increasing use of solar rooftops, battery storage, and heat pumps.

Utility – Large-scale renewable projects and grid modernization.

### By Region

North America (U.S., Canada, Mexico) – Strong policy support and investment in renewables and EVs.

Europe (Germany, France, UK, Spain, Italy, Rest of Europe) – Leading the global transition with ambitious net-zero targets.

Asia-Pacific (China, India, Japan, South Korea, Australia, Rest of Asia-Pacific) – Rapid urbanization and energy demand driving renewable investments.

LAMEA (Brazil, South Africa, Saudi Arabia, Rest of LAMEA) – Increasing adoption of solar and wind projects, supported by global climate goals.

## Regional Insights

The Asia-Pacific region dominates the clean energy transition market due to rapid economic growth and rising energy demand. Countries such as China, India, and Japan are heavily investing in renewable energy infrastructure, with governments providing strong policy support and incentives. The declining costs of solar PV, wind turbines, and storage solutions are making clean energy more affordable and accessible across the region.

Europe remains a global leader in policy-driven clean energy adoption, while North America continues to grow with significant investments in renewable energy, smart grids, and electrification initiatives. Meanwhile, LAMEA is steadily advancing its transition through solar and wind projects, particularly in the Middle East and Latin America.

## Key Market Players

Leading companies shaping the clean energy transition market include:

Tesla Inc.

Schneider Electric

Ørsted A/S

Iberdrola, S.A.

Brookfield Asset Management

Enel Spa

Vestas Wind Systems A/S

Plug Power Inc.

NextEra Energy, Inc.

BYD Company Ltd.

These players are focusing on innovation, partnerships, and large-scale renewable projects to strengthen their market presence.

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## Conclusion

The clean energy transition market is on a high-growth trajectory, projected to reach \$3.7 trillion by 2028. Driven by renewable adoption, electrification, hydrogen economy, and global climate commitments, the sector offers immense opportunities for governments, businesses, and investors. With Asia-Pacific leading the charge, the global shift toward clean energy marks a defining moment in building a sustainable and resilient energy future.

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