

# **Global Green Carbon Market Size Study, by Source (Biomass, Environmental), by Application (Supercapacitor, Fuel Cell, Lithium-ion Batteries, Others) and Regional Forecasts 2025-2031**

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## **Abstracts**

Global Green Carbon Market is valued at approximately USD 8.57 million in 2023 and is anticipated to grow with a healthy growth rate of more than 12.01% over the forecast period 2024-2032. Green carbon refers to the carbon stored in the biosphere, absorbed from the atmosphere by plants through photosynthesis. Green carbon ecosystems, such as those found in natural forests, significantly impact greenhouse gas concentration levels in the atmosphere. Additionally, green or bio-based carbon can be produced from biomass through processes like pyrolysis and hydrothermal carbonization. Government agencies, such as the European Union and the United States Environmental Protection Agency, are also promoting green carbon development, further fueling R&D activities in this sector. Furthermore, Countries such as Brazil, the U.S., China, and India are actively promoting green energy by transitioning from fossil-based energy production systems to renewable energy sources. This shift creates significant investment opportunities for the commercial production of biomass-sourced green carbon.

The rise in population, coupled with the increased demand for consumer goods, has led to rapid urbanization and industrialization, resulting in higher greenhouse gas emissions. To mitigate these emissions, governments worldwide are emphasizing reducing greenhouse gases and promoting sustainable practices. For instance, the Paris Agreement aims to reduce greenhouse gas emissions by 45% by 2030 and reach net-zero emissions by 2050. Green carbon, derived from sustainable sources, offers an eco-friendly alternative with minimal environmental impact, thus driving its utilization in various applications, including energy generation and storage. However, the high costs

associated with green carbon formulation and the need for a skilled workforce pose challenges to market growth. Despite these challenges, ongoing R&D investments aim to enhance the efficiency and reduce the production costs of green carbon, creating lucrative opportunities for the market.

The key region in the Global Green Carbon Market includes North America, Europe, Asia Pacific, Latin America, and Middle East and Africa. In 2023, Europe dominates the Global Green Carbon Market in terms of revenue and projected to grow at the highest CAGR during the forecast period 2024-2032. This is due to the proactive environmental policies, substantial investments in renewable energy, and stringent carbon reduction targets across the region. The region's leadership is underpinned by extensive research and development initiatives focused on sustainable technologies and green practices across industries. European nations' commitment to achieving carbon neutrality by mid-century drives demand for green carbon solutions, including carbon capture and utilization technologies. Strong government support, coupled with private sector innovations and partnerships, positions Europe at the forefront of shaping international standards and initiatives aimed at mitigating climate change impacts through the promotion of green carbon initiatives.

Major market players included in this report are:

Mitsui Chemicals, Inc.

TEIJIN LIMITED

Charm Industrial

Drax

Clean Energy Systems

Vattenfall AB

Orsted A/S

Alstom

Enviva

Babcock & Wilcox Enterprises, Inc.

The detailed segments and sub-segment of the market are explained below:

By Source:

Biomass

Environmental

By Application:

Supercapacitor

Fuel Cell

Lithium-ion Batteries

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Saudi Arabia

South Africa

RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with country-level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand-side and supply-side analysis of the market.

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