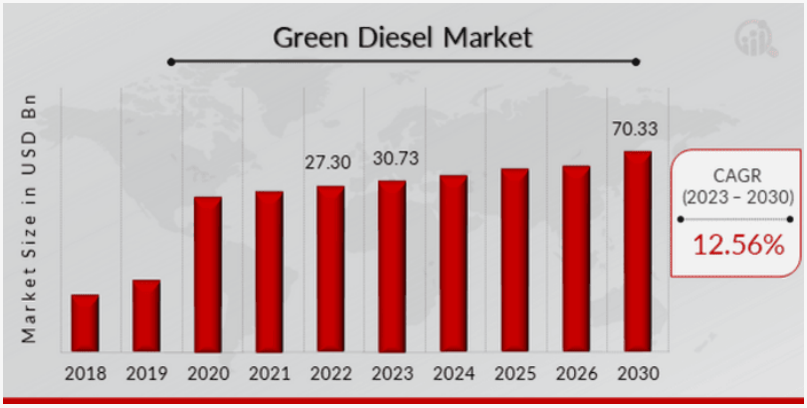
Green Diesel Market Set to Achieve a 12.56% CAGR by 2030 | Shell Plc, Eni, Phillips 66, Neste Oyj, Chevron Corporation

The Green Diesel Market focuses on the production and demand for eco-friendly diesel alternatives, driven by sustainability and renewable energy trends



Green Diesel Market Overview

NEW YORK, NY, UNITED STATES, April 23, 2025 /EINPresswire.com/ -- According to a comprehensive research report by Market Research Future (MRFR), The Green Diesel Market Information by Feedstock, Technology, Type, Application and Region - Forecast till 2030, The Global Green Diesel Market is estimated to reach a valuation of USD 70.33 Billion at a CAGR of 12.56 % during the forecast period from 2023 to 2030.

> Green Diesel Market is poised for growth, driven by increasing demand for sustainable fuel solutions in various industries"
>
> *MRFR*

Green Diesel Market Overview:

The green diesel market—also known as renewable diesel—is gaining significant traction globally as the world moves towards sustainable and environmentally friendly energy solutions. Green diesel is a biofuel produced through hydrotreatment of renewable feedstocks such as animal fats, vegetable oils, and waste cooking oils. Unlike traditional biodiesel, green diesel is chemically identical to petroleum diesel and can be used in existing diesel engines without modifications. The push for cleaner energy alternatives, rising environmental awareness, and stringent government regulations are key factors propelling the growth of this market.

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Key Players

Neste Oyj (Finland)

NX100 Green Diesel & Lubricants (India)

Chevron Corporation (US)

Valero Energy Corporation (US)

Gevo, Inc. (US)

Phillips 66 (US)

Marathon Petroleum Corporation (US)

Aemetis, Inc. (US)

Global Clean Energy Holdings, Inc. (US)

Shell Plc (UK)

PBF Energy Inc. (US)

Honeywell International Inc. (US)

Eni (Italy)

Market Dynamics

The green diesel market operates within a complex web of technological, environmental, and regulatory factors. The industry is characterized by a growing demand for alternative fuels and increasing investments in renewable energy infrastructure. With global concerns over climate change and carbon emissions, governments and industries alike are seeking cleaner fuels to reduce their carbon footprint. In this context, green diesel stands out due to its low greenhouse gas emissions and compatibility with existing infrastructure. Moreover, advancements in feedstock processing technologies and innovations in hydrotreatment processes have made production more efficient and cost-effective.

On the demand side, sectors such as transportation, logistics, and agriculture are showing increased interest in green diesel due to its cleaner-burning properties and performance parity with conventional diesel. The aviation industry is also exploring renewable diesel blends as a

stepping stone towards sustainable aviation fuels (SAF). As the technology matures and economies of scale are achieved, green diesel is expected to play a vital role in decarbonizing multiple sectors.

Market Drivers

One of the primary drivers of the green diesel market is the global shift toward low-carbon energy sources. Governments across the world are implementing policies and subsidies to promote biofuels and reduce dependence on fossil fuels. Programs such as the Renewable Fuel Standard (RFS) in the United States and the Renewable Energy Directive (RED II) in the European Union set clear targets for blending renewable fuels into the conventional fuel mix. These policies not only ensure market stability but also incentivize producers to expand their green diesel capacities.

Another significant driver is the increasing focus on sustainability by corporations and governments alike. Fleet operators and logistics companies are increasingly looking to green diesel to meet corporate sustainability goals. For instance, major players in retail and delivery services are transitioning their vehicle fleets to run on green diesel to reduce carbon emissions and improve public perception.

Additionally, technological advancements in biofuel production and feedstock flexibility are further propelling market growth. Modern hydrotreatment technologies allow producers to utilize a wide range of feedstocks, improving yield efficiency and reducing dependency on any single resource. This adaptability helps stabilize supply and manage production costs, making green diesel more competitive in the broader energy market.

Market Restraints

Despite its many advantages, the green diesel market faces several challenges and restraints. One of the most pressing issues is the high production cost compared to fossil diesel. While technological improvements have helped reduce costs, green diesel remains more expensive to produce, particularly in regions without substantial government incentives or tax breaks.

Another restraint is the limited availability of sustainable feedstocks. As demand for green diesel rises, so does the pressure on supply chains for renewable feedstocks. This can lead to competition with other industries, such as food and agriculture, potentially driving up costs and raising ethical concerns about food vs. fuel.

Additionally, infrastructural limitations in some regions may hinder market expansion. Although

green diesel can be used in existing diesel engines, its production and distribution infrastructure—especially in developing countries—may be underdeveloped. Lack of awareness and limited refueling stations further slow adoption among end-users.

Green Diesel Market Segmentation

Green Diesel Feedstock Outlook

Vegetable Oil

Animal or Fish Fats

Agricultural Residue

Other Biomass

Green Diesel Technology Outlook

Hydro-processing

Catalytic Upgrading

Pyrolysis

Biomass to Liquid (BTL) Thermochemical Process (Gasification)

Green Diesel Type Outlook

Pure Form

Blended Form

Green Diesel Application Outlook

Fuel

Power Generation

Others

Green Diesel Regional Outlook

North America

US

Canada

Europe

Germany

France

UK

Italy

Spain

Rest of Europe

Asia-Pacific

China

Japan

India

Australia

South Korea

Rest of Asia-Pacific

Middle East & Africa

Turkey

Israel

North Africa

GCC

Rest of the Middle East & Africa

South America

Brazil

Argentina

Mexico

Rest of South America

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Regional Analysis

North America is currently one of the largest markets for green diesel, led predominantly by the United States. The Renewable Fuel Standard (RFS) and California's Low Carbon Fuel Standard (LCFS) have significantly incentivized green diesel production and usage. Several large-scale refineries are being converted to produce renewable diesel, and investments in feedstock supply chains are increasing. Canada is also stepping up its efforts with new Clean Fuel Regulations, aiming to reduce the carbon intensity of fuels over time.

Europe is another key market, driven by the European Union's climate goals and the Renewable Energy Directive II (RED II). Countries like Sweden, Finland, and the Netherlands are leading the adoption of green diesel. Neste, a Finland-based company, is one of the world's largest producers of renewable diesel and has significantly contributed to the region's leadership. European nations are also focusing on circular economy principles, making waste-based feedstocks more prominent in green diesel production.

The Asia-Pacific region shows promising growth potential due to increasing energy demand, urbanization, and government focus on reducing emissions. Countries like Japan, South Korea, and China are exploring green diesel as part of their broader renewable energy strategies. While the region still lags behind North America and Europe in terms of large-scale production, investments are gradually increasing, particularly in Southeast Asian nations with abundant agricultural waste and palm oil byproducts.

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