

# **Second- and Third-Generation Biofuels Market by Generation (Second and Third), Biofuel Type (Bioethanol, Biodiesel, Biobutanol, Bio-DME), Feedstock (Simple Lignocellulose, Syngas & Biomass, Complex Lignocellulose, Algae), and Application (Transportation, Power Generation) - Global Opportunity Analysis and Industry Forecast, 2014 - 2022**

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## **Abstracts**

The global second- and third-generation biofuels market accounted for \$3,574 million in 2015, and is expected to reach at \$57,124 million by 2022, registering a CAGR of 48.9% from 2016 to 2022. Biofuels are fuels produced by a biochemical reaction using biological sources such as raw materials. Based on production, biofuels can be categorized into first-, second-, and third-generation biofuels. First-generation biofuels, also known as conventional biofuels, are prepared using food crops, such as soy, rapeseed, corn, and similar others. Second-generation or advanced biofuels are produced from non-food crops and waste, such as forest residues, non-edible oils, crops, such as Miscanthus, and others. Third-generation biofuels are derived from algae, which has proven to be the most efficient source for biofuel production. The market is expected to register a double-digit growth rate during the forecast period, attributed to the increased demand from the transportation and the power generation industry.

The global second- and third-generation biofuels market has driven by the factors, such as sustainable and clean source of fuel, easy availability of raw materials that are non-food crops & wastes, lesser concentration of greenhouse gases as compared to conventional fuels, and governmental incentives that supports the development of

advanced biofuel production technologies. Provides opportunities for new entrants due to lesser number of fully commercialized manufacturers of different types of advanced biofuels.

The second- & third-generation biofuels market is segmented based on biofuel type, feedstock, generation, and geography. The generation segment includes second- and third generation. According to feedstock, it is divided into simple lignocellulose, syngas & biomass, complex lignocellulose, algae, and others. On the basis of biofuel type, it is classified into bioethanol, biodiesel, biobutanol, bio-DME (dimethyl ether), and others. Based on application, it is categorized into transportation, power generation, and others. Geographically, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA, with country-level analysis of each region.

#### Key Market Players

Algenol Biofuels, Inc.

Abengoa S.A.

Sapphire Energy, Inc.

Chemrec AB

GranBio

DONG Energy A/S

INEOS Bio

Clariant

ZeaChem, Inc.

Blue Marble Biomaterials

The global second and third-generation biofuels market is highly competitive, owing to the presence of several well-established manufacturers and vendors. These companies are extensively undergoing R&D of new products for specific applications and conditions.

## KEY BENEFITS FOR STAKEHOLDERS

This report provides an extensive analysis of the current trends, emerging estimations, and dynamics in the global second- and third-generation biofuels market from 2014 to 2022, which identifies the prevailing market opportunities.

Exhaustive analysis facilitates in understanding the types of biofuels, feedstocks used currently, and the variants expected to gain prominence in the future.

Extensive analysis of applications estimates the various types of biofuels that are expected to be used in different end-user applications.

A detailed analysis is conducted by following key product positioning and monitoring the top competitors within the market framework.

Key market players are profiled and their strategies are analyzed thoroughly, which helps understand the competitive outlook of the market.

## KEY MARKET SEGMENTS

### By Generation

Second Generation

Third Generation

### By Biofuel Type

Bioethanol

Biodiesel

Biobutanol

Bio-DME

Others (Biogas and Bio Oil)

## By Feedstock

Simple Lignocellulose

Syngas & Biomass

Complex Lignocellulose

Algae

Others (Forest Residue, and Nonedible Oil)

## By Application

Transportation

Power Generation

Others (Heating, etc.)

## By Geography

North America

U.S.

Canada

Mexico

Europe

Belgium

Germany

France

Italy

Spain

Rest of Europe

Asia-Pacific

China

Thailand

India

Rest of Asia-Pacific

LAMEA

Brazil

Argentina

South Africa

Rest of LAMEA

Other prominent market players are:

American Process, Inc.

Amyris, Inc.

Butamax Advanced Biofuels, LLC.

Enerkem

Emco Klimatechnik Gmbh & Co. KG

Gevo, Inc.

POET, LLC.

Joule Unlimited, Inc.

(The above companies are not profiled, but can be done on client's request)

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