

Renewable Chemicals - Winning Imperatives and Market Forecast

<https://marketpublishers.com/r/R1BA6C96CFEEN.html>

Date: September 2010

Pages: 189

Price: US\$ 3,955.00 (Single User License)

ID: R1BA6C96CFEEN

Abstracts

The global renewable chemicals market is estimated to reach US\$ 67.13 billion in 2015 from about US\$ 38.67 billion in 2010. The alcohols segment holds the largest market share, while the polymers segment is expected to have the highest growth rate due to the increasing applications of bio-polymers in the manufacture of biodegradable and compostable plastics and in consumer goods such as cell phones and laptops.

The major factor driving the growth of the renewable chemicals market is the growing consumer demand and governmental support for 'green' products that reduce greenhouse gas emissions. Renewable chemicals also reduce dependence on finite non-renewable petroleum resources.

Market estimates and forecast

The report provides in-depth market estimates and forecast for global renewable chemicals market as follows:

Products: Alcohols, organic chemicals, ketones, polymers, and other markets.

Application: Industrial, transportation, textiles, food safety, environment, communication, housing, recreation, health and hygiene, and other applications.

Catalysis: Biocatalysis and chemical catalysis

Technology: Thermo-chemical conversion, fermentation and bioconversion, product separation and bioconversion, enzymatic hydrolysis, gasification-fermentation, acid hydrolysis, biochemical-thermochemical, biochem-organosolve, fischer-tropsch diesel,

reductive transformation, dehydrative transformation, and other technologies.

Platform Chemicals: 1, 4-diacids, 2, 5-furan dicarboxylic acid, 3-hydroxypropionic acid, aspartic acid, glucaric acid, glutamic acid, itaconic acid, levulinic acid, glycerol, and other chemicals.

Contents

EXECUTIVE SUMMARY
MARKET OVERVIEW
RENEWABLE CHEMICALS PRODUCT
PLATFORM CHEMICALS
RENEWABLE CHEMICALS APPLICATIONS
CATALYSIS AND TECHNOLOGY
GEOGRAPHICAL ANALYSIS
COMPETITIVE LANDSCAPE
PATENT ANALYSIS

1 INTRODUCTION

1.1 KEY TAKE AWAYS
1.2 REPORT DESCRIPTION
1.3 MARKET COVERED
1.4 STAKEHOLDERS
1.5 RESEARCH METHODOLOGY

2 SUMMARY

3 MARKET OVERVIEW

3.1 INTRODUCTION
3.2 MAJOR RENEWABLE CHEMICALS
3.3 SOURCES OF RENEWABLE CHEMICALS
3.4 DRIVERS
 3.4.1 ABUNDANT & LOW-COST FEEDSTOCK
 3.4.2 TECHNOLOGICAL INNOVATIONS
 3.4.3 CONSUMER ACCEPTANCE FOR ECO-FRIENDLY PRODUCTS
 3.4.4 GOVERNMENT SUPPORT FOR ECO-FRIENDLY SOURCES & PROCESSES
 3.4.5 GROWING POPULARITY OF BIOPOLYMERS & PLATFORM CHEMICALS
 3.4.6 BOOST FOR RURAL ECONOMY
3.5 RESTRAINTS
 3.5.1 PRODUCTION ISSUES
 3.5.2 COST ISSUES
 3.5.3 TRADE-OFF WITH VITAL RESOURCES
3.6 OPPORTUNITIES

3.6.1 CHEMICAL CONVERSION CAN IMPROVE YIELDS

3.6.2 COLLABORATION WITH UNIVERSITIES

3.6.3 NEW PRODUCT DEVELOPMENT

3.6.3.1 Lignin

3.6.3.2 Isobutanol

4 RENEWABLE CHEMICALS PRODUCTS

4.1 ALCOHOLS

4.1.1 DRIVERS & RESTRAINTS

4.1.1.1 Lower GHG emissions

4.1.1.2 Governmental support for eco-friendly fuel

4.1.1.3 Lower price-sensitivity

4.1.2 C1 AND C2

4.1.2.1 Methanol

4.1.2.2 Ethanol

4.1.2.2.1 Ethanol blends

4.1.2.2.2 Use of food crop as feedstock

4.1.2.2.3 Production & revenue forecasts

4.1.3 C3 (PROPANOL)

4.1.4 C4 (ISOBUTANOL)

4.1.5 C5 AND ABOVE

4.1.5.1 Pentanol

4.1.5.2 2-ethyl-1-hexanol

4.1.5.3 1-nonanol

4.1.5.4 2-octanol

4.1.5.5 1-octanol

4.1.5.6 1-dodecanol

4.2 POLYMERS

4.2.1 MARKET DRIVERS

4.2.1.1 Economic benefits

4.2.1.2 New technology developments

4.2.2 RESTRAINTS & OPPORTUNITIES

4.2.2.1 Lack of cost competitiveness

4.2.2.2 Increasing range of applications

4.2.3 POLYLACTIC ACID (PLA)

4.2.4 POLYHYDROXYALKANOATES (PHA)

4.2.5 POLYVINYL ACETATE

4.2.6 POLYAMINO ACIDS

4.2.7 POLYGLYCOLIC ACID

4.2.8 POLYACRYLAMIDE

4.3 ORGANIC ACIDS

4.3.1 FORMIC ACID

4.3.2 ACETIC ACID

4.3.3 GLYCOLIC ACID

4.3.4 BUTYRIC ACID

4.4 KETONES

4.4.1 ACETONE

4.4.2 METHYL ETHYL KETONE

5 PLATFORM CHEMICALS

5.1 1,4-DIACIDS

5.1.1 FUMARIC ACID

5.1.2 SUCCINIC ACID

5.1.2.1 Drivers & Opportunities

5.1.2.1.1 Application in varied industries

5.1.2.1.2 Commercial use for derivatives

5.1.2.1.3 Initiatives by industry participants

5.2 2, 5- FURAN DICARBOXYLIC ACID

5.2.1 DRIVERS & RESTRAINTS

5.2.1.1 Derivatives have wide-ranging applications

5.2.1.2 Lack of knowledge about polymer formation

5.2.1.3 Non-selective dehydration of sugar

5.3 3- HYDROXYPROPIONIC ACID

5.3.1 DRIVERS & RESTRAINTS

5.3.1.1 Wide-ranging applications

5.3.1.2 Need for new catalysts increases R&D costs

5.4 ASPARTIC ACID

5.4.1 DRIVERS

5.4.1.1 Benefits to producers

5.4.1.2 Market potential of amino analogs

5.4.2 OPPORTUNITIES

5.4.2.1 An alternative, direct fermentation route

5.4.2.2 Better quality products

5.5 LEVULINIC ACID

5.5.1 DRIVERS & OPPORTUNITIES

5.5.1.1 Derivatives hold significant value

5.5.1.2 Improved yields & widening applications

5.6 GLYCEROL

5.6.1 DRIVERS

5.6.1.1 Increasing demand for biodiesel

5.6.1.2 Increasing cost-effectiveness

5.7 ITACONIC ACID

5.8 GLUCARIC ACID

5.9 GLUTAMIC ACID

6 RENEWABLE CHEMICALS APPLICATION

6.1 INDUSTRIAL

6.2 TRANSPORTATION

6.3 FOOD PACKAGING & BEVERAGE BOTTLING

6.4 FERTILIZERS

6.5 TEXTILES

6.6 ENVIRONMENT

6.7 HOUSING

6.8 RECREATION

6.9 HEALTH & HYGIENE

7 CATALYSIS & TECHNOLOGIES

7.1 BIOCATALYSIS

7.1.1 DRIVERS

7.1.1.1 High specificity and multi-step reactions

7.1.1.2 Improved enzymes enhance industrial processes

7.1.2 RESTRAINTS & OPPORTUNITIES

7.1.2.1 Slower process increases production costs

7.1.2.2 Limited biocatalyst inventory

7.1.2.3 Lesser water and energy consumption

7.2 CHEMICAL CATALYSIS

7.2.1 DRIVERS & RESTRAINTS

7.2.1.1 Faster and simpler processes

7.2.1.2 High energy requirements

7.3 THERMO-CHEMICAL CONVERSION

7.3.1 GASIFICATION

7.3.2 PYROLYSIS

7.3.3 HYDROTHERMAL UPGRADING

- 7.3.4 FERMENTATION AND BIOCONVERSION
- 7.3.5 PRODUCT SEPARATION AND UPGRADING
- 7.3.6 ENZYMATIC HYDROLYSIS
- 7.3.7 GASIFICATION-FERMENTATION
- 7.3.8 ACID HYDROLYSIS
- 7.3.9 BIOCHEMICAL-THERMOCHEMICAL
- 7.3.10 BIOCHEM-ORGANISOLVE
- 7.3.11 FISCHER TROPSCH DIESEL
- 7.3.12 REDUCTIVE TRANSFORMATION
- 7.3.13 DEHYDRATIVE TRANSFORMATION

8 GEOGRAPHY ANALYSIS

- 8.1 U.S.
- 8.2 BRAZIL
- 8.3 EUROPE
- 8.4 ASIA

9 COMPETITIVE LANDSCAPE

- 9.1 AGREEMENTS ACCOUNT FOR 57% OF ALL STRATEGIC DEVELOPMENTS
- 9.2 MAXIMUM DEVELOPMENTS IN ACIDS SEGMENT
- 9.3 PLASTICS & PACKAGING LEADS APPLICATION MARKET
- 9.4 NOVOZYMES IS THE MOST ACTIVE COMPANY

10 PATENT ANALYSIS

- 10.1 PATENT ANALYSIS BY GEOGRAPHY
- 10.2 PATENT ANALYSIS BY MARKET SEGMENT
- 10.3 PATENT ANALYSIS BY ASSIGNEE

11 COMPANY PROFILES

- 11.1 ABENGOA BIOENERGY
 - 11.1.1 OVERVIEW
 - 11.1.2 PRIMARY BUSINESS
 - 11.1.3 STRATEGY
 - 11.1.4 DEVELOPMENTS
- 11.2 ARCHER-DANIELS-MIDLAND COMPANY

- 11.2.1 OVERVIEW
- 11.2.2 PRIMARY BUSINESS
- 11.2.3 STRATEGY
- 11.2.4 DEVELOPMENTS
- 11.3 BASF
 - 11.3.1 OVERVIEW
 - 11.3.2 PRIMARY BUSINESS
 - 11.3.3 STRATEGY
 - 11.3.4 DEVELOPMENTS
- 11.4 BIO-AMBER
 - 11.4.1 OVERVIEW
 - 11.4.2 PRIMARY BUSINESS
 - 11.4.3 STRATEGY
 - 11.4.4 DEVELOPMENTS
- 11.5 BLUEFIRE ETHANOL
 - 11.5.1 OVERVIEW
 - 11.5.2 PRIMARY BUSINESS
 - 11.5.3 STRATEGY
 - 11.5.4 DEVELOPMENTS
- 11.6 BRASKEM
 - 11.6.1 OVERVIEW
 - 11.6.2 PRIMARY BUSINESS
 - 11.6.3 STRATEGY
 - 11.6.4 DEVELOPMENTS
- 11.7 DEGUSSA EVONIK
 - 11.7.1 OVERVIEW
 - 11.7.2 PRIMARY BUSINESS
 - 11.7.3 STRATEGY
 - 11.7.4 DEVELOPMENTS
- 11.8 DOW CHEMICAL COMPANY
 - 11.8.1 OVERVIEW
 - 11.8.2 PRIMARY BUSINESS
 - 11.8.3 STRATEGY
 - 11.8.4 DEVELOPMENTS
- 11.9 DSM
 - 11.9.1 OVERVIEW
 - 11.9.2 PRIMARY BUSINESS
 - 11.9.3 STRATEGY
 - 11.9.4 DEVELOPMENTS

11.10 DUPONT

11.10.1 OVERVIEW

11.10.2 PRIMARY BUSINESS

11.10.3 STRATEGY

11.10.4 DEVELOPMENTS

11.11 GENECOR INTERNATIONAL, INC

11.11.1 OVERVIEW

11.11.2 PRIMARY BUSINESS

11.11.3 OVERALL STRATEGY

11.11.4 DEVELOPMENTS

11.12 GEVO, INC

11.12.1 OVERVIEW

11.12.2 PRIMARY BUSINESS

11.12.3 STRATEGY

11.12.4 DEVELOPMENTS

11.13 GREENFIELD ETHANOL, INC

11.13.1 OVERVIEW

11.13.2 PRIMARY BUSINESS

11.13.3 STRATEGY

11.13.4 DEVELOPMENTS

11.14 NATURE WORKS LLC

11.14.1 OVERVIEW

11.14.2 PRIMARY BUSINESS

11.14.3 STRATEGY

11.14.4 DEVELOPMENTS

11.15 NOVOZYMES

11.15.1 OVERVIEW

11.15.2 PRIMARY BUSINESS

11.15.3 STRATEGY

11.15.4 DEVELOPMENTS

11.16 SAPPHIRE ENERGY, INC.

11.16.1 OVERVIEW

11.16.2 PRIMARY BUSINESS

11.16.3 STRATEGY

11.16.4 DEVELOPMENTS

11.17 SEAMBIOTIC

11.17.1 OVERVIEW

11.17.2 PRIMARY BUSINESS

11.17.3 STRATEGY

11.17.4 DEVELOPMENTS

11.18 SPARTAN CHEMICAL COMPANY, INC.

11.18.1 OVERVIEW

11.18.2 PRIMARY BUSINESS

11.18.3 STRATEGY

11.18.4 DEVELOPMENTS

11.19 UOP LLC

11.19.1 OVERVIEW

11.19.2 PRIMARY BUSINESS

11.19.3 STRATEGY

11.19.4 DEVELOPMENTS

11.20 VERENIUM CORP

11.20.1 OVERVIEW

11.20.2 PRIMARY BUSINESS

11.20.3 STRATEGY

11.20.4 DEVELOPMENTS

APPENDIX

U.S.PATENTS

EUROPE PATENTS

JAPAN PATENTS

WIPO PATENTS

List Of Tables

LIST OF TABLES

TABLE 1 GLOBAL RENEWABLE CHEMICALS MARKET, BY PRODUCTS 2008 – 2015
(\$MILLION)

TABLE 2 RENEWABLE ETHANOL: GLOBAL PRODUCTION VOLUME 2008 – 2015
(MILLION LITRES)

TABLE 3 RENEWABLE ETHANOL: GLOBAL MARKET REVENUE 2008 – 2015
(\$MILLION)

TABLE 4 RENEWABLE POLYMERS: GLOBAL PRODUCTION VOLUME 2008 – 2015
(THOUSAND TONS)

TABLE 5 RENEWABLE POLYMERS: GLOBAL MARKET REVENUE 2008 – 2015
(\$THOUSAND)

TABLE 6 BIOSUCCINIC ACID: POTENTIAL MARKET

TABLE 7 RENEWABLE CHEMICALS: INDUSTRIAL APPLICATIONS

TABLE 8 RENEWABLE CHEMICALS: TRANSPORTATION APPLICATIONS

TABLE 9 MAJOR PLAYERS AND PRODUCT DEVELOPMENTS

TABLE 10 MAJOR PLAYERS AND TECHNOLOGIES USED

TABLE 11 AGREEMENTS, PARTNERSHIPS, AND JOINT VENTURES (JANUARY
2008 TO JULY 2010)

TABLE 12 NEW PRODUCT LAUNCHES (JANUARY 2008 TO JUNE 2010)

TABLE 13 INVESTMENTS (JULY 2009 TO JULY 2010)

List Of Figures

LIST OF FIGURES

- FIGURE 1 FUTURE VISION FOR RENEWABLE CHEMICALS AND FUELS
- FIGURE 2 COMMERCIAL STATUS OF MAJOR RENEWABLE CHEMICALS
- FIGURE 3 SOURCES OF RENEWABLE CHEMICALS
- FIGURE 4 BIOFEEDSTOCK USE IN RENEWABLE CHEMICALS
- FIGURE 5 GHG EMISSION OF DIFFERENT FUELS
- FIGURE 6 FLUCTUATIONS IN CRUDE OIL PRICES (2000 – 2009)
- FIGURE 7 GLOBAL BIOETHANOL PRODUCTION, BY GEOGRAPHY (2009)
- FIGURE 8 FEEDSTOCK FOR RENEWABLE ETHANOL
- FIGURE 9 BIO-BASED PLA: REVENUE & PRODUCTION FORECAST (2008 TO 2015)
- FIGURE 10 EVOLUTION OF BIO-BASED PLA
- FIGURE 11 BIO-BASED PHA: REVENUE & PRODUCTION FORECAST (2008 TO 2015)
- FIGURE 12 BIO SUCCINIC ACID: POTENTIAL APPLICATIONS
- FIGURE 13 GLOBAL RENEWABLE CHEMICALS MARKET REVENUE & PRODUCTION VOLUME, BY GEOGRAPHY (2009)
- FIGURE 14 U.S. RENEWABLE ETHANOL MARKET: REVENUE & PRODUCTION FORECAST (2008 – 2015)
- FIGURE 15 METHODOLOGY FOR DERIVING U.S. REVENUE
- FIGURE 16 BRAZIL RENEWABLE ETHANOL MARKET: REVENUE & PRODUCTION FORECAST (2008 – 2015)
- FIGURE 17 EUROPE RENEWABLE ETHANOL MARKET: REVENUE & PRODUCTION FORECAST (2008 – 2015)
- FIGURE 18 ASIA RENEWABLE ETHANOL MARKET: REVENUE & PRODUCTION FORECAST (2008 – 2015)
- FIGURE 19 MAJOR GROWTH STRATEGIES IN THE RENEWABLE CHEMICALS MARKET (2008 – JULY 2010)
- FIGURE 20 GROWTH STRATEGIES BY PRODUCT (2008 – JULY 2010)
- FIGURE 21 GROWTH STRATEGIES BY APPLICATIONS (2008 – JULY 2010)
- FIGURE 22 GROWTH STRATEGIES BY COMPANIES (2008 – JULY 2010)
- FIGURE 23 PATENT ANALYSIS BY GEOGRAPHY (JANUARY 2006 – JULY 2010)
- FIGURE 24 PATENT GROWTH IN U.S., EUROPE, JAPAN & WIPO (JANUARY 2006 – JULY 2010)
- FIGURE 25 PATENT ANALYSIS BY SEGMENT (JANUARY 2006 – JULY 2010)
- FIGURE 26 PATENT GROWTH IN ALCOHOLS, ACIDS, AND POLYMERS (JANUARY 2006 – JULY 2010)

FIGURE 27 PATENT ANALYSIS BY ASSIGNEE (JANUARY 2006 – JULY 2010)

I would like to order

Product name: Renewable Chemicals - Winning Imperatives and Market Forecast

Product link: <https://marketpublishers.com/r/R1BA6C96CFEEN.html>

Price: US\$ 3,955.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/R1BA6C96CFEEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970