



CONTEXT

Multi-client study prospectus

The Future of the North American Biofuels Industry

Is corn ethanol sustainable, or will other feedstocks replace it?

Can macro-economic conditions support the long term feasibility of biofuels?

Will high oil prices drive investment into previously unprofitable petroleum sources?

The Context Network

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Introduction

What does the future hold for renewable fuels? Is corn fuel ethanol sustainable? The current U.S. corn ethanol expansion is projected to reach a capacity of five billion gallons in 2006-07. Due to a favorable mix of economic factors, this growth has largely been a result of the record profitability of ethanol dry mills. But, what happens when these factors change? Will the same technologies and feedstocks prevail? Or, will alternative technologies and feedstocks become more relevant? Will the Midwest remain the hub for biofuels?

“There are currently 95 ethanol plants in the country, with a combined production capacity of more than 4.3 billion gallons a year. There are 34 ethanol plants and nine expansions under construction with a combined annual capacity of more than 2.1 billion gallons.”

**Manufacturing and
Technology News,
March 3, 2006**

The dynamics that will dictate where this market goes are complex. Technology, competitive market forces, globalization, global security and government will play a role. While predicting the future requires assumptions, business leaders need accurate forecasts with the assumptions both well defined and tracked for change. Undoubtedly, the biofuels industry expansion presents spectacular opportunities for those organizations that have made the best forecasts and advantageously positioned themselves. It also poses a threat to some organizations. If unprepared, they will find themselves less relevant in their respective value chain.

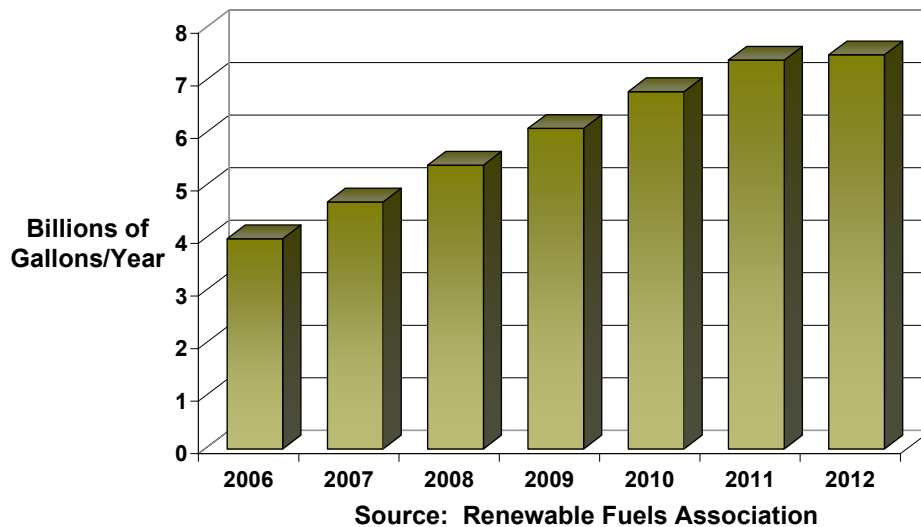
The bottom line is that the biofuels industry has undergone extensive change and will continue to change at an unprecedented rate. Businesses should be taking action to position themselves optimally.



Why This Study?

This study provides insights into the North American biofuels industry, as well as its global implications. It provides a detailed analysis of the technologies, economics, and structure of commercialized biofuels as well as those in development. Moreover, it provides an in-depth analysis and discussion of the competitive and complementary nature of these technologies and the second and third order events that may occur as a result of broad adoption. Finally, the study will pose a spectrum of reasonable and likely future scenarios and their drivers and how that plays into the economic success of these feedstocks and technologies.

Ethanol Demand from Renewable Fuels Standard



Who Should Subscribe?

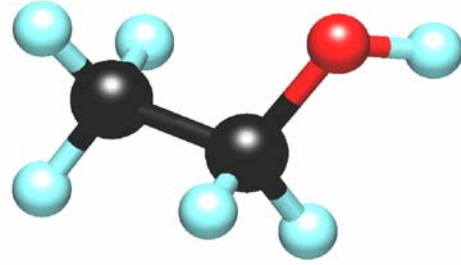
Companies who have an interest in the biofuels industry should subscribe, including seed and biotechnology companies who develop feedstocks for biofuel plants, to oil companies who ultimately utilize biofuels with their petroleum products.

Grain handlers/merchandisers, crop input suppliers, existing and new ethanol manufacturers and transportation organizations are affected by the biofuels industry, as are those firms supplying capital, legal support, environmental services and other professional services. Each will be impacted in the relatively near future by the rapid expansion of the North American biofuels industry. This report provides leaders the tools and information to make the best decisions for their respective organizations.

Study Outline

Biofuels Industry Issues

1. Geopolitical and globalization issues
2. United States national interests
3. Oil and fuel markets
 - A. Structure
 - B. Supply and demand; Prices
 - C. Capacity
 - D. Value chain analysis
4. Public funding
5. Renewable fuel initiatives and incentives
6. Solutions other than biofuels
7. Other issues



Biofuels Feedstocks: Technology, Economics and Structure

1. Description and current status
2. Conversion technology review
3. Intellectual property background
4. Manufacturing economics and capital requirements
5. Long-term market opportunity
6. Infrastructure requirements
7. Potential constraints
8. Key participants
9. Role of government, public research funding and subsidies
10. Co-products
11. Impact on agricultural, food, and fiber markets

Discussion and Analysis

1. Comparison of feedstock technologies
 - A. Technical feasibility
 - B. Economics
 - C. Potential volume and magnitude
 - D. Infrastructural feasibility
 - E. Probability
2. Short-, medium- and long-term economics
3. Impact of global trade of biofuels and co-products
4. Profiles of each energy crop and a bio-refinery
5. Logistical and production support required
6. Second and third order events
7. One geographical center versus regional centers

How the Future Will Play Out

1. Scenario analysis (i.e. oil drops to below \$40 per barrel or new technology enables wood chips to become more economical ethanol feedstock than corn.)
2. Comparable price of oil that biofuels sources compete
3. Centers of gravity for each technology
4. Decisive points for determining which technology (or combination of technologies) will win
5. Ramifications of changes and what culminating events may occur

Commercialized Biofuels Feedstocks

- corn grain
- sugarcane
- sugar beets

Biofuels Feedstocks In Development

- agricultural residue (bagasse, corn stover, wheat straw)
- forestry residue
- logging and sawmill residue
- construction and demolition wood residue
- recycled paper
- municipal waste
- herbaceous crops such as switch grass and miscanthus
- woody crops such as poplar, willow and eucalyptus
- other potential feedstocks

Summaries

Methodology

Step 1: Background Research

Literature review, Internet searches, industry discussions

Step 2: Data Analysis and Synthesis

Quantitative analysis; modeling; visualization of data, analysis, and meaning; scenario analysis; and sensitivity analysis

In this step we plan to challenge each assumption to ensure that the excitement over this new market is grounded with objective analysis and rational conclusions

“We’ll also fund additional research in cutting-edge methods of producing ethanol, not just from corn, but from wood chips and stalks, or switch grass. Our goal is to make this new kind of ethanol practical and competitive within six years.”

**President George W. Bush
State of the Union Address
January 31, 2006**

Step 3: Expert Interviews

Key players, industry organizations, academia and industry consultants

Step 4: Report Preparation

First draft, expert review, professional edit and final draft

Step 5: Final Report

Deliverables

Context will deliver the final report in an electronic document, organized per the study outline along with a PowerPoint presentation, on CD, DVD or mini-drive. Hard copies are available upon request. The report also includes a Context teleconference presentation, upon request. An in-person presentation can be arranged for an additional fee.

Project Schedule

May 2006..... Project Kickoff
November 2006..... Final report sent to subscribers
November 2006 – March 2007 Available for individual client presentations

Project Team

Mr. Alex Fink, Managing Partner with Context, will have overall management responsibility for the project. Along with Mr. Fink, Dr. Alison Morgan will be a principal author for the report. Dr. Morgan is also a consultant with Context and has more than 20 years of biotechnology experience in the genetic modification of crop plants, product development and commercialization. She will play a key role in the technology aspects of the information collection, analysis, and discussion. Experts in the area of economic modeling, biofuels plant engineering, gasoline blendstock marketing, fuel ethanol distribution, and biofuels plant feasibility have been retained by Context for this project. Additional experts will be retained as needed.

About Context

The Context Network provides business management consulting services to the world's leading agriculture, biotechnology and food companies, as well as government agencies. The firm is composed of a core of professional consultants, complemented by an extensive network of industry and subject area experts. Other multi-client reports offered by Context include Biotech Traits Commercialized, Quality Traits Commercialized and the Global Seed Market Database.

Investment

The Future of the North American Biofuels Industry can be purchased for \$37,900. Subscribers will be invoiced for one-half of the purchase price upon receipt of the signed order form, with the remainder due upon shipment of the final study.

Order Form

To subscribe to **The Future of the North American Biofuels Industry**, please read and agree to the following statement:

“To protect our investment in this report, and that of other subscribers, we agree to maintain confidentiality of the study results within our company. We may make this report available to any subsidiary company in which we hold more than 50% interest, or to a parent company that holds more than 50% interest in our firm. We understand that we may use or disclose any information in this report that is public knowledge, or that was in our possession before receipt of the study, or that comes to us from third parties independently of this report.”

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Acknowledgement of Acceptance

The completion of the information below confirms that I want to subscribe to The Future of the North American Biofuels Industry report by The Context Network, and agree to be invoiced for one-half of the purchase price upon receipt of this signed order form, with the remainder due upon shipment of the final study.

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