Ethanol Production Costs

A Worldwide Survey

A Special Study from F.O. Lichts

In conjunction with Agra CEAS Consulting

This essential study contains over 220 pages of data and analysis on bioethanol policy, markets, market drivers and costs of production. It provides policymakers and producers across the world market with an invaluable resource.

Includes over 130 tables and charts

- Breakdown of ethanol production costs in major producing countries
- Use of different feedstocks
- Ethanol price information
- Policy and regulatory framework
- Outlook for the ethanol sector
- Trade and trade policies
- Market prospects
- Ethanol balances - imports, production, consumption and exports
- World market drivers
- Transport and distribution systems
- Development of by-product values
- Ethanol plants and projects

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Updated and expanded

Full report on CD and in print
Ethanol Production Costs

A Worldwide Survey

Fully updated and expanded, this study from F.O. Licht and Agra CEAS presents a comprehensive review of ethanol production costs worldwide, with particular emphasis on eight major producing countries. The study also examines and analyses the policies and regulatory frameworks in individual countries which impact on ethanol production programmes and costs.

Political and Regulatory Framework

Fuel ethanol is often more expensive to produce than gasoline, and therefore political incentives are essential for fuel ethanol to be competitive, and such incentives can have a considerable influence on the price of ethanol. This unique market study examines and analyses the policy and regulatory framework for ethanol in over 20 countries, including leading producers Brazil and USA.

Ethanol Production

Many countries have introduced ethanol programmes over the last 25 years, the main reasons being:
- rising oil prices
- concern about fuel emissions
- the requirements of the Kyoto Protocol on carbon emissions
- the provision of alternative outlets for agricultural producers.

The second part of the study focuses on the major ethanol producing countries in the Americas, Asia and Europe. The study outlines the feedstocks and production processes used and shows the different ways in which ethanol is used.

World Ethanol Trade

Government programs have generated a substantial increase in production capacities worldwide using a range of feedstocks. The study provides ethanol supply and demand balances for the major producers worldwide and analyses the key trade flows and trade agreements which influence these, in particular Brazil’s role as the leading driver of world markets.

Price Formation and Production Costs

The core of the study consists of a detailed analysis of ethanol production costs by country and by type of feedstock. The total cost of producing ethanol is broken down into three elements:
- Capital-related or fixed costs
- Variable operating costs
- Feedstock costs

The study presents cost calculations for ten countries and a broad range of existing and potential feedstocks (sugar, molasses, maize – wet and dry milling, cellulose, maize stover, etc). The study also details by-product prices which may help offset the cost of production from the comparatively high priced feedstocks used in Europe.

Ethanol Plants and Projects Worldwide

Current and planned ethanol production capacities are listed in the study by country and company.
Executive summary
Political and regulatory framework
- Brazil
  - The launch of Proalcool
  - The Proalcool crisis
  - Liberalisation of the alcohol sector
  - Flex-fuel vehicles
  - Indirect alcohol subsidies
  - Outlook for the alcohol sector in Brazil
- The United States
  - The Clean Air Act Amendments
  - Ethanol impetus from MTBE bans
  - The New Energy Bill and the Renewable Fuels Standard (RFS)
  - The outlook for fuel ethanol in the US
- The European Union
  - The “Promotional” Directive (Directive 2003/30/EC)
  - The proposal on a new fuel quality Directive
  - The Directive on the Taxation of Energy Products
  - The Community’s blending target for 2020
  - Feedstock availability for ethanol production
  - Area requirement
  - The Reform of the Sugar Market Regime and ethanol
    - Spain
    - France
    - Sweden
    - Germany
    - Italy
    - Poland
    - United Kingdom
    - The Netherlands
    - Other EU
- Russia
- Ukraine
- Kazakhstan
- Canada
- Colombia

Ethanol production
- Feedstocks and production processes
- World ethanol production for fuel, beverage and industrial use
- Ethanol production in Brazil
- Ethanol production in the US
  - Fuel ethanol production in the US
  - Trends in plant size
- Ethanol production in the EU
- Ethanol production in Colombia
- Ethanol production in Guatemala
- Ethanol production in India
- Ethanol production in Pakistan
- Ethanol production in Thailand
- Ethanol production in Australia

World ethanol trade
- The Americas
- Europe
- Asia-Pacific
- Outlook

Price formation
- Process of price formation
  - Feedstock costs
  - Investment costs
  - Operating costs
  - Policy impact
  - Impact of the gasoline price
  - Ethanol prices

Ethanol production costs
- Ethanol production costs in Brazil
- Ethanol production costs in the US
  - Production costs for ethanol from dry-milled maize in the US
  - Production costs for ethanol from wet-milled maize in the US
- Ethanol production costs in the EU
- Ethanol production costs in Colombia
- Ethanol production costs in India
- Ethanol production costs in Central America
- Ethanol production costs in China
- Summary of ethanol production costs
- Outlook
- Prices of by-products from ethanol production
  - Prices of by-products from ethanol production in the EU
  - Prices of by-products from ethanol production in the US

Annex 1 - Ethanol plants and projects worldwide as of August 2007
Annex 2 - Tax advantages for fuel ethanol production in the US

Over 130 tables, graphs and charts including
The Brazilian national alcohol policy
The fuel ethanol policy of the European Union
India - Evolution of biofuels policy
Shares in the Otto engine fuel market in Brazil
Fuel ethanol production in the EU 2000-2006
Evolution of the ethanol market in the EU 1995-2015
Comparison of wheat prices Russia and EU Jul 2006 - Aug 2007
Canada’s Kyoto target
World ethanol production by feedstock (2006)
World ethanol consumption by user group (2006)
Shares of fuel, industrial and beverage ethanol 1975-2015
Fuel ethanol production in the US
Ethanol plant sizes in the US
Brazilian undenatured ethanol exports by country
EU undenatured ethanol imports/exports by country
Anhydrous and hydrous fuel ethanol prices in Brazil
Ethanol and gasoline prices in the US
Ethanol prices in the European Union
The Alternative Fuel Standard in the US
Targeted fuel ethanol consumption in the EU (Directive 2003/30/EC)
Tax advantages for fuel ethanol in the EU
Biofuel quotas in Germany 2007-2015
Ethanol production in Italy by feedstock
Ethanol and fuel ethanol production in Poland
Change in tax incentives for bioethanol in Poland
Fuel ethanol production costs in Ukraine
Estimated and projected fuel ethanol demand in Canada for 2000-2025
The Brazilian ethanol balance
The US ethanol balance
The EU ethanol balance
World ethanol imports 2002-2006
World ethanol exports 2002-2006
Investment costs for ethanol production
Investment costs for an ethanol plant in Europe
Summary of ethanol production costs
By-products of ethanol production
Ethanol and by-product output of wet and dry milling
F.O. Licht is the leading soft commodity analyst with over 140 years' experience and produces a range of regular market reports which include:
- World Ethanol and Biofuels Report
- European Ethanol Price Report
- World Biodiesel Price Report
- World Grain Markets Report
- International Sugar & Sweetener Report
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- International Coffee Report

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Each year F.O. Licht organises a series of major international conferences in Europe, Asia, Latin America and USA. They include World Ethanol, the premier event for the ethanol industry, World Biofuels, Biofuels Finance & Investment, Sugar and Ethanol Asia, Sugar & Ethanol Brazil, Biodiesel Brazil and many more.

For more information go to www.agra-net.com or e-mail marketing@agra-net.com or phone +44 (0) 20 7017 7500.

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**Agra CEAS Consulting** is a long-established and respected international agrifood consultancy based in the UK and Brussels, Belgium. We carry out a broad range of economic, policy and market consultancy to help both public and commercial sector clients throughout the world monitor, analyse, assess, evaluate and implement policies and business strategies in agriculture, food, environment, trade and, more recently, biofuels and ethanol.

We work extensively with our sister company F.O. Licht, the leading international commodity analyst and information provider in the biofuels and ethanol sector, to provide independent advice and analysis for the global biofuels and ethanol industry. Our unrivalled understanding of the international biofuels and ethanol industry spans the entire length and breadth of the biofuels and ethanol value chain, from feedstock to fuel. We are uniquely placed to offer a wide range of consulting services, including:
- Biofuel and ethanol global and regional supply, demand and price forecasting
- Biofuels and agricultural policy analysis and business impact assessments
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- Global market information and sector reviews
- Agriculture/feedstock analysis

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