### China Bioenergy Industry Report, 2007-2008



In 2007, China's fuel ethanol output reached 1.6 million tons, of which 80% used corn as raw materials. Based on the proportion 1:3.3, more than four million tons of corn was consumed.

In 2008, China's fuel ethanol production capacity will increase rapidly, thanks to several fuel ethanol projects to be put into operation successively in the year. It is estimated that China's annual fuel ethanol output will reach five million tons in 2010 and utilization rate of ethanol gasoline will be more than 50%. Moreover, corn-based ethanol has stopped expanding production capacity, as government policies have clearly restricted the development of grain-based ethanol. Therefore, developing non-grain ethanol has become an inevitable trend.



### China Key Producers of Fuel Ethanol, 2007

Enterprises	Production capacity (10,000 <del>t/</del> y)	Supply regions	Raw materials
Jilin Ethanol Fuel Co.	60	Jilin and Liaoning provinces	corn
China Resources Alcohol (Heilongjiang) Co.	10	Heilongjiang provinces	corn
Henan Tianguan Group Co.	30	Henan, Hubei and Hebei provinces and another ten cities	mainly wheat
Anhui BBCA Biochemical Co.	44	Anhui, Shandong, Jiangsu and Hebei provinces and another ten cities	corn
Total	144		

### Source: ResearchInChina

China's domestic enterprises have accelerated biodiesel development. China's some conglomerates have completed their trial production of biodiesel, including China National Petroleum Corp., China's largest natural gas and crude oil producer, COFCO, the largest importer and exporter of grains, and China National Off-shore Oil Corp., China's largest off-shore oil producer. It is forecasted that China's biodiesel output will increase rapidly in 2008 and 2009 and will reach two million tons in 2010.

### Biodiesel Projects under Construction or in the Pipeline in China

Province	Scale	Company	Construction
	(10,000 <del>∀</del> y)		period
Inner	25	Tianhong (Tongliao)	2007-2008
Mongolia		Biological Science &	
		Technology Co.	
Guangxi	20	Guangxi Liuzhou Minghui	2008-2009
		Biofuels Co.	
Henan	10	Luoyang Tianchang	2006-2008
		Bio-engineering Co.	
Shanghai	15	Shanghai, Sino	2007-2008
		Bio-chemical Science	
		Technology Co.	
Hebei	10	Hebei Zhongtianming	2006-2007
		Bio-fuel-oil Co.	
Henan	10	Jiyuan Zhongyi Petrol	2006-2008
		Industry Co.	
Henan	10	Luoshan Jinding Chemical	2006-2010
		Industry Co.	

### Source: ResearchInChina

China's biological energy power generation has developed rapidly and the total installed capacity has reached 2.2 million kW, of which 1.7 million KW was from Bagasse co-generation and 500,000 KW was powered by agriculture and forestry wastes, methane, direct-burning of rubbish and landfill gas. Generally speaking, efforts made to develop biological energy are still limited, therefore, China's bioenergy has a huge potential for future development.

China has sufficient raw materials resources for production of biomass. Only the agricultural wastes can be converted into energy, which is equivalent to 500 million tons of standard coal and 350 million tons of crude oil (about 2.5 billion barrels).

Chinese government has strongly supported the development of bioenergy and has launched preferential policies for biomass energy producers, including tax breaks and direct subsidies to some products.

Based on abundant information from the National Bureau of Statistics and listed companies, this report makes an in depth study on the current situation, main categories, policy, development potential and key enterprises of bioenergy industry, makes an analysis of development characteristics of fuel ethanol, biodiesel, biomass power generation and makes a comparison between profitability of fuel ethanol by different raw materials. Additionally, this report also forecasts the development trend of China bioenergy industry.

### **Table of Contents**

Researchinchina

1. Status Quo of China Bioenergy Industry

1.1 Overview

- 1.1.1 Development Prospect
- 1.1.2 Advantages and Disadvantages
- 1.2 Operation Status of China Bioenergy Industry, 2007

1.2.1 Operation Status of China Fuel Ethanol Industry, 2007

1.2.2 Operation Status of China Biodiesel Industry, 2007

1.2.3 Operation Status of China Bioenergy Power Generation Industry, 2007

- 2. Industrial Environment for China Bioenergy Industry
  - 2.1 Economic Environment
  - 2.1.1 China Macro Economy Overview
  - 2.1.2 Monetary Policy
  - 2.1.3 Financing Environment
  - 2.2 Policy Environment

### 3. Status Quo of China Fuel Ethanol Industry, 2007

- 3.1 Status Quo of Grain-based Ethanol Industry, 2007
- 3.1.1 Overview
- 3.1.2 Profitability Analysis
- 3.1.3 Production Efficiency Analysis
- 3.1.4 Raw Materials Supply Analysis
- 3.1.5 Development Prospect

3.2 Status Quo of China Non-grain Ethanol Industry, 2007

3.2.1 Overview

- 3.2.2 Overview of Raw Materials
- 3.2.3 Production Efficiency Analysis
- 3.2.4 Profitability Analysis
- 3.2.5 Development Prospect

4.Status Quo of China Biodiesel Industry, 2007

- 4.1 Overview
- 4.2 Raw Material Resources
- 4.2.1 Status Quo of Rape Biodiesel
- 4.2.2 Status Quo of Jatropha Curcas Biodisel
- 4.2.3 Biodiesel by Other Raw Materials
- 4.3 Biodiesel Technology and Equipment
- 4.4 Investment Analysis
- 4.5 Development Prospect

### 5. Status Quo of China Bioenergy Power Generation Industry, 2007

5.1 Overview

٠

5.2 Projects of Bioenergy Power Generation, 2005-2007

5.3 Crop Stalks Power Generation Industry

- 5.3.1 Overview
- 5.3.2 Biomass Power Generation Projects Under Construction



5.4 Methane Power Generation Industry 5.4.1 Overview 5.4.2 Economic Benefits 5.4.3 Methane Resources Potentials 5.4.4 Methane Power Generation Projects, 2007 6. Kev Enterprises 6.1 Anhui BBCA Biochemical Co., Ltd 6.1.1 Profile 6.1.2 Operation, 2007 6.1.3 Ownership Structure 6.1.4 Finance Analysis 6.1.5 Development Trend 6.2 Jilin Fuel Ethanol Co., Ltd 6.2.1 Profile 6.2.2 Latest Development 6.2.3 Development Trend 6.3 Beihai Gofar Marine Biological Industry Co., Ltd 6.3.1 Profile 6.3.2 Operation, 2007 6.3.3 Ownership Structure 6.3.4 Finance Analysis 6.3.5 Development Trend 6.4 Hainan Yedao (Group) Co., Ltd 6.4.1 Profile 6.4.2 Operation, 2007 6.4.3 Ownership Structure 6.4.4 Finance Analysis 6.4.5 Development Trend 6.5 Petrochina Co., Ltd 6.5.1 Profile 6.5.2 Operation, 2007 6.5.3 Latest Development 6.5.4 Finance Analysis

6.5.5 Development Trend

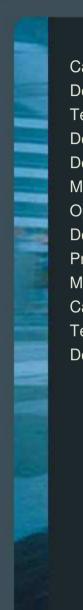
6.6 CNOOC 6.6.1 Profile 6.6.2 Latest Development 6.6.3 Development Trend 6.7 Henan Tianguan Group Co., Ltd 6.7.1 Profile 6.7.2 Latest Development 6.7.3 Development Trend 6.8 Huadian Power International Co., Ltd 6.8.1 Profile 6.8.2 Operation, 2007 6.8.3 Ownership Structure 6.8.4 Finance Analysis 6.9 National Bio Energy Co., Ltd. 6.9.1 Profile 6.9.2 Investment Projects 6.9.3 Development Trend 6.10 Xinhua Zhongke Bioenergy Power Generation Co., Ltd 6.10.1 Profile 6.10.2 Investment Projects 6.10.3 Development Trend 6.11 Wuxi Huaguang Boiler Co., Ltd 6.11.1 Profile 6.11.2 Operation, 2007 6.11.3 Ownership Structure 6.11.4 Finance Analysis 6.11.5 Development Trend

- 7. Development Trend of China Bioenergy industry, 2008
  - 7.1 Development Trend of Fuel Ethanol
  - 7.2 Development Trend of Biodiesel
  - 7.3 Development Trend of Bioenergy Power Generation

## **Selected Charts**

China Corn Consumption, 2005-2007 Sales Revenue Structure of BBCA Biochemical Co., Ltd, 1H 2007 Sales Revenue Structure of Petrochina, 2007 Sales Revenue Structure of Huaguang, 1H 2007 Adavateges and Disadvanteges of China Bioenergy development Some Key Enterprises of China Fuel Ethanol Industry, 2006 Reserves Ratio Adjustment of Central Bank over the Years Costs of Tapioca-based and Corn-based Fuel Acohol (according to market average price,1H 2007) Sensitivity Analysis about Fuel Athnol and Corn Price's Impact on Profits of Fuel Ethanol Part of Biodiesel Projects, 2006-2007 Some Projects Of Being or Will be Constructed by regions Constructed projects of Bioenergy Power Generation, 2005-2007 Bioenergy Power Generation Projects being constructed,2007 Sewage Treatment in China Cities Part of Metane Power Generation Projects, 2007 Main Operation Data of BBCA Biochemical Co., Ltd, 2003-2007(CNY million) Ten Key Shareholders of BBCA Biochemical Co., Ltd, June30, 2007 Profivtability of BBCA Biochemical Co., Ltd Operation Ability of BBCA Biochemical Co., Ltd





Capital Structure of BBCA Biochemical Co., Ltd Development Ability of BBCA Biochemical Co., Ltd Ten Key Shareholders of Beihai Gofar, June30, 2007(CNY million) Debt-paying Ability of Debt-paying Ability of Development Ability of Beihai Gofar Main Operation Data of Hainan Yedao, 2003-2007(CNY million) Operation ability of Hainan Yedao Development Ability of Hainan Yedao Profiytability of PetroChina Main Operation Data of Huadian, 2003-2007(CNY million) Capital Structure of Huadian Ten Key Shareholders of Huaguang, June30, 2007(CNY million) Debt-paying Ability of BBCA Biochemical Co., Ltd



# How to Buy

Product details			How to Order		
	USD	File	By email: report@researchinchina.com		
Single user	2,000	PDF	By fax: 86-10-82600829		
Enterprisewide	3,000	PDF	By online:		
Publication date: March 2008			www.researchinchina.com		
For more information, call our office in Beijing, China:					
Tel: 86-10-82600828					
Website: www.researchinchina.com					

