

Ethanol Fact Book

Highlights & Executive Summary

The *Ethanol Fact Book* is a comprehensive report that compiles the most up-to-date statistics and research information available to provide a clear and complete picture of the ethanol industry and ethanol policy in the United States. Of primary importance is the industry's impact on a number of public policy sectors including the environment, national security, economic development, the national trade deficit, agriculture and energy independence.

Environment

Ethanol is a proven pollution fighter. It has successfully been used in carbon monoxide control programs for nearly 20 years. Although it is not required, the petroleum industry relies on ethanol to meet federal reformulated gasoline emission requirements in most major urban areas in the U.S. And, with gasoline and diesel consumption accounting for about 41 percent of the greenhouse gases inventory in the United States, ethanol reduces greenhouse gas emissions by 29 to nearly 100 percent, according to research supported by the Department of Energy.

National Security

Ethanol is the only proven commercial scale renewable transportation fuel currently available in the market place, and is rapidly approaching the point of replacing 10% of the nation's gasoline supply. With an ever increasing dependence on foreign oil ethanol could play a significant role in reducing crude and gasoline imports as well as financial and military resources in the Middle East.

Economic Development

In 2007 the nearly 7 billion gallons of annual ethanol production capacity represented a 38 percent increase over the previous year, showing accelerated growth and investment. Further, the Government Accountability Office reports that a 50 percent decline in the production of fuel ethanol would actually cost the U.S. Treasury \$3.2 billion annually. A more dramatic 90 percent production decline would cost the Treasury \$6.3 billion. Estimates of the number of U.S. jobs already attributed to ethanol range from 95,000 to 135,000 – and that number is growing rapidly as plants are built or expanded. Over \$10 billion has been invested by the private sector in ethanol production facilities. This number is expected to reach \$40 billion by 2009.

National Trade Deficit

According to the Federal Reserve Bank of San Francisco, imported petroleum products in 2006 accounted for nearly 40% of the U.S. Trade Deficit. With petroleum products accounting for the largest component of U.S. imports that rate will continue to grow on a daily basis. Given average crude oil prices of \$58 per barrel paid by U.S. refiners in

2006, the use of ethanol replaced billions of gallons of crude oil imports and lowered the trade deficit by \$6.9 billion.

Agriculture

The USDA projected that the increased demand for corn to support the additional ethanol production needed to replace MTBE increased cash receipts for farmers by \$2.3 billion between 2000 and 2004. Furthermore, eliminating the ethanol tax incentive would decrease income for American corn growers between \$5.9 billion and \$10.2 billion each year. Between 56,000 and 112,000 American jobs would be lost.

Energy Independence

Today the United States imports more than 60 percent of its oil and gasoline and, at current rates, will import 70 percent by 2025. The General Accounting Office concluded that ethanol could displace 311,000 barrels of crude oil per day by 2010. Ethanol increases the supply of motor fuel and in most cases lowers the price of gasoline to consumers.

Emerging Technologies and New Feedstocks

A wide range of feedstocks for ethanol production are on the horizon. Agricultural wastes like corn cobs and stover, wheat straw, sugar cane bagasse, and other byproducts are being researched. Woody biomass from America's forests as well as wood wastes from wood processing, specialty energy crops like switchgrass and fast growing trees are among the other sources for ethanol production.

A range of technologies using acid, enzymes, microbes, and gasification all show promise of achieving commercial viability.

In addition, a new generation of biobased products can replace other products that currently are made from a petroleum base.

Meeting Food & Fuel Needs

Corn supplies in the United States are more than adequate to meet the growing need for clean fuels like ethanol. The use of corn to date has not resulted in increases in the cost of food to consumers. The corn used in ethanol production is animal feed quality and after the corn is converted to ethanol, it is used as a high protein feed.

Proposed legislation to increase the renewable fuels standard will incentivize non corn feedstocks. Recent studies by a coalition of grocery, cattle, and feeder interests confirm that the levels called for in the new RFS will not appreciably increase the price of grain.