

THE ETHANOL SUCCESS STORY

Providing Proven Benefits for America's
Economy, Environment & Energy Security



Ethanol has a great story to tell. Over the past decade, this country has grown a grassroots ethanol industry from the ground up, providing a renewable fuel that puts Americans to work, promotes a healthier environment, and improves the nation's energy security outlook. Ethanol is truly just in its infancy, and these benefits will continue to grow as ethanol reaches its full potential and becomes a larger part of the nation's fuel supply.

Economy

The production of ethanol in the United States has proven to be a powerful economic engine. Each of America's 120-plus ethanol production facilities provides high-quality jobs, spurs the local economy through the purchase of goods and services, and in many cases circulates dividends to local owners.

- In 2006 alone, the ethanol industry added \$41.9 billion in gross economic output to the U.S. economy, created 143,000 jobs in all sectors, and put an additional \$6.7 billion into the pockets of consumers.
- Forty percent of the U.S. ethanol industry is owned by farmers and other local investors who benefit from shareholder dividends and whose local communities benefit by the circulation of these dollars.
- The ongoing operations of a 50 million gallon per year (mgy) ethanol plant increase household income in the local economy by up to \$30 million annually; for a 100 mgy ethanol plant, this number increases to \$50 million annually.
- The U.S. Department of Agriculture estimates that in 2004 alone, farm program costs were reduced by \$3.2 billion due to the ethanol industry's demand for corn and the subsequent rise in corn prices.

Environment

Ethanol is inherently cleaner than gasoline, and adding ethanol to gasoline oxygenates the fuel and helps it burn more cleanly. In every city, county, and state that has switched to ethanol-blended fuel, air quality has improved.

- Argonne National Lab found that in 2004, U.S. ethanol use reduced CO₂-equivalent greenhouse gas emissions by 7 million tons, equal to removing the emissions of more than 1 million cars from the road.
- The American Lung Association of Metropolitan Chicago credits ethanol-blended fuel with reducing smog-forming emissions by 25% since 1990.
- A scientific review of real-world ethanol use on the East Coast, West Coast, and in the Midwest found that the use of ethanol blends reduces carbon monoxide and soot particulate matter by at least one-third, and also reduces smog-forming ozone pollution ("Clearing the Air with Ethanol: A Real-World Review of the Impacts of Ethanol-Blended Fuel").

Energy Security

Producing our own ethanol here in the U.S. decreases the need to import oil and finished gasoline, often from people who don't like us very much. Ethanol adds to the transportation fuel supply at a time when gasoline refining capacity is stretched to the max, diversifying the fuel portfolio and insulating against price spikes.

- While no new oil refineries have been built in the last 30 years, ethanol production facilities are coming online at the rate of more than two per month.
- In 2006 alone, the domestic production of nearly 5 billion gallons of ethanol meant that the U.S. needed to import 206 million fewer barrels of crude oil, valued at \$11.2 billion.
- According to the Energy Information Administration, the 7.5 billion gallon ethanol production level minimum set in the Renewable Fuels Standard could reduce oil consumption by 80,000 barrels per day.
- Ethanol is key to reducing our country's trade deficit in crude oil, a figure that has been steadily increasing: \$27 billion in 1987 up to \$100 billion in 2002. The U.S. Commerce Department estimates that each \$1 billion of trade deficit costs the U.S. 19,100 jobs.

For more information on these and other ethanol-related topics, visit www.ethanol.org.

ETHANOL MYTHS & MISCONCEPTIONS



MYTH: Ethanol has a negative energy balance

Ethanol's energy balance is clearly positive. Only one study found ethanol to have a negative energy balance, and it has been soundly, scientifically proven wrong by a number of sources. Ethanol's energy balance is not in question.

An examination of Dr. Pimentel's work shows why his findings are off-base:

- His 20-year-old study uses outdated, questionable data on agriculture and ethanol production. He makes incorrect assumptions, such as assuming all corn is irrigated when only a tiny percentage is, assigning a "zero" value to co-products, and assuming that coal is widely used to process ethanol when it is not.
- He adds all manner of irrelevant energy inputs to "stack the deck" against ethanol: for example, the calories the farmer eats during breakfast, the truck that delivers a new tractor to the farm each year, as so on.

These sources have studied ethanol's energy balance and found it to clearly be positive:

USDA, Michigan State University, Science Journal, Natural Resources Defense Council, University of Nebraska, Institute for Local Self-Reliance, Argonne National Laboratory, and others.

Why "energy balance" is asking the wrong question:

- Energy is irrelevant unless it can be turned into the form in which you need it. Until we can put a gallon of crude oil or an ear of corn directly in our gas tank, it is going to take energy to transform these energy sources into the liquid fuel form that we need.
- The greater social good cannot be factored into these numbers games. The bottom line is that the world's supply of oil is finite, expensive, and not environmentally friendly. Ethanol is a clean, renewable alternative.

For more information: www.ethanol.org → Press Room → Hot Topics → Energy Balance

MISCONCEPTION: Ethanol forces a "food vs. fuel" choice

There is plenty of corn for all uses – food, feed, and fuel. Corn prices do factor in to foods in which corn is an ingredient, but all groceries and other consumer goods are being impacted by higher energy prices.

- Grocery price increases are more a result of higher energy prices than corn prices. New research finds that energy costs have twice the impact in the grocery store than corn prices do. If a consumer paid \$10 more for groceries due to corn prices, those same groceries would cost \$20-\$30 more due to energy costs.
- Only about 4 cents worth of corn go into a box of Corn Flakes. Of every food-cost dollar, 81 cents goes for "off-farm" costs such as processing, packaging, labor, transportation, and energy.
- While a consumer might pay \$10 more a year due to corn prices, that consumer is paying an additional \$10 per week to fill up his/her vehicle's fuel tank.
- Research shows that the Consumer Price Index (CPI) increases occurring now are generally in line with the average, between 2-4% annually.
- The majority of exported corn goes to feed livestock in developed countries, not to feed the malnourished in developing countries, so it is inaccurate to characterize ethanol as directly removing food from the hungry.

For more information: www.ethanol.org → Press Room → Hot Topics → Food, Feed & Fuel

MYTH: Ethanol harms air quality

Ethanol has a proven track record of beneficial impacts on air quality. Computer modeling programs that attempt to project air quality impacts should be weighed against the real-world demonstration of ethanol's air quality benefits.

- In every city, county, and state that has switched to ethanol-blended fuel, air quality has improved. This is a proven fact.
- Research of real-world ethanol use on the East & West Coast and in the Midwest shows that ethanol-blended fuel reduces carbon monoxide and soot particulate matter by at least one-third.
- The same research shows that ethanol use does reduce ozone-forming pollution, real-world data that is contrary to computer models like Dr. Jacobson's at Stanford.

For more information: www.ethanol.org → Press Room → Hot Topics → Ethanol & Auto Emissions

AMERICAN COALITION FOR ETHANOL

Resource Guide for Journalists



Ethanol has a great story to tell, and we are here to help tell it. The American Coalition for Ethanol (ACE) is the nation's largest ethanol advocacy association with nearly 2,000 members nationwide including ethanol producers, businesses that supply goods and services to the industry, the agriculture community, farmers, investors, and other individuals and organizations supportive of renewable energy. ACE has been active since 1987 and is long-recognized as a progressive organization, the "grassroots voice of the ethanol industry."

Ethanol expert availability

ACE executives are available to share their expertise through interviews, guest appearances, or as background sources and have been featured in numerous regional, national, and trade publications, on radio and television.

Brian Jennings, Executive Vice President: Brian oversees the activities of ACE, generating grassroots support for public policies that advance ethanol and rural America. He has testified for legislation at the state level and drafted key agriculture and ethanol initiatives through his work for a U.S. Senator in Washington DC.

Ron Lamberty, Vice President / Market Development: With a career spanning 20 years in the oil industry, Ron is a leading authority on ethanol marketing. He helps develop new demand centers for ethanol by providing unmatched expertise to petroleum marketers on ethanol logistics and marketing.

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Ethanol.org

ACE's website, www.ethanol.org, has recently been redesigned to better serve media professionals who are seeking at-your-fingertips information. Ethanol.org features a wealth of in-depth information on the production and use of ethanol in the United States. Look for these key menu headings:

Press Room: In addition to Press Releases and ACE Editorials, the Press Room contains these helpful items:

- Hot Topics: the most current ethanol information conveniently located on one page, currently displaying Energy Balance, "Food vs. Fuel", and Emissions.
- Ethanol at a Glance: a quick-reference page for the most current ethanol industry statistics

All About Ethanol: The bulk of general ethanol information is housed in this section, including:

- Ethanol 101: ethanol basics, benefits
- Ethanol Facilities: how and where ethanol is made
- Ethanol & Your Vehicle: the types and use of ethanol-blended fuel
- Ethanol Research: research studies on various ethanol-related topics

STATUS 2007: ACE State-by-State Ethanol Handbook

Each year, ACE publishes STATUS, a state-by-state ethanol handbook containing information about ethanol production, marketing and use, petroleum refining and marketing for all 50 U.S. states. STATUS also summarizes the public policies and regulations states have adopted to impact ethanol production and use.

The 2007 edition of STATUS, the organization's second annual publication, is available for PDF download at www.ethanol.org through the "Ethanol Stats & Laws" link at the bottom of the homepage. To request a free hardbound copy of the publication, contact Kristin Brekke at kbrekke@ethanol.org.

Ethanol Today

Each month, ACE publishes *Ethanol Today* magazine, highlighting the people, policies, and events that are leading the U.S. ethanol industry. To inquire about a complimentary media subscription, contact Kristin.