



*"The Voice of the Ethanol Industry
for More Than a Quarter Century"*

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2008 State of the Ethanol Industry Address

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Gandhi once said, "We must become the change we want to see."

But change is hard. Change forces people to rethink, to adjust and to chart a new course that they may not have envisioned and do not support. Change breeds critics, as those unready or unwilling to change make a last desperate effort to cling to the safety of the status quo. But change prevails. Change is inevitable. The challenge is to bring about the change we want to see.

Today's U.S. ethanol industry is bringing about revolutionary change. It is reshaping our rural landscape, revitalizing communities and providing the most significant value added market farmers have ever had.

Even more dramatic is the change that ethanol is bringing to U.S. motor fuel markets. Ethanol is now a ubiquitous component of the U.S. motor fuel supply, blended in more than 50% of the nation's gasoline, and will very soon be in virtually every single gallon of gasoline sold from coast to coast and border to border.

We see these changes as nothing but positive. The 6.5 billion gallons of ethanol produced last year provided employment for 238,000 workers, added \$47.6 billion to the nation's GDP, and put an additional \$12.3 billion into the pockets of American consumers. The ethanol industry generated an estimated \$4.6 billion in federal tax revenue and \$3.6 billion in additional tax revenue for state and local governments. Moreover, according to USDA, the increased demand for grain used in ethanol production reduced federal farm program costs by more than \$8 billion, meaning that even with the cost of the tax incentive, ethanol saved U.S. taxpayers more than \$9.2 billion last year.

The production and use of 6.5 billion gallons of ethanol in 2007 displaced the need for 228 million barrels of oil, saving more than \$16 billion, or \$45 million a day, from enriching those that wish us ill. Oil's stranglehold on our economy remains; but we can at least now see a light at the end of the pipeline. The amount of ethanol produced last year exceeds the volume of oil we imported from Iraq and is nearly half of what we imported from Venezuela.

Put another way, ethanol is easing the refinery bottleneck that has plagued U.S. motor fuel markets and led to chronic gasoline price volatility. There's not been a new oil refinery built in this country in more

than 30 years. But we've opened the equivalent of 3 medium sized biorefineries over the past few years alone, and will add another this year. Ethanol production capacity is outpacing the growth in gasoline demand, which is directly impacting gasoline imports and reducing the price of gasoline at the pump.

A Consumer Federation of America study estimates that at \$3.00 per gallon of gasoline, the 36 billion gallon RFS will save consumers more than \$180 billion!

And as the global community begins to wrap its arms around climate change, the 6.5 billion gallons of renewable ethanol produced in the U.S. last year reduced greenhouse gases by approximately 10 million tons, or the equivalent of removing more than 1.5 million vehicles off America's roadways.

Those are all remarkable achievements, and reflect the tremendous efforts of the people in this room to build a more sustainable energy future for all Americans.

But, of course, critics abound. Change is hard.

This past year saw the emergence of a food vs. fuel debate, as if we need to choose, as if farmers are incapable of supplying the growing needs for food, fiber and fuel. The chattering class of naysayers ignores that ethanol biorefineries produce both fuel and feed, that we only process starch, leaving the high feed value protein to be marketed to livestock and poultry. This past year, the U.S. ethanol industry produced more than 14 million metric tons of high quality distillers feed.

Taking the fallacy of food vs. fuel to a contrived conclusion, some argue insistently that rising corn prices are at the heart of increased consumer food prices. Ethanol was blamed for higher prices for everything from milk (even though milk prices are set by a government formula unrelated to feed prices) to Mexican tortillas (even though an 8¢ per pound increase in #2 yellow corn in the U.S. had no relevance to an 80¢ per pound increase in the price of white corn in Mexico).

In the zeal to vilify biofuels, some seem to overlook the impact of energy on food prices. A thorough statistical analysis of the issue completed by Informa concluded that the impact of rising ethanol demand contributed less than 5% to food inflation last year; and that the overwhelming driver was the rising cost of the marketing bill, as energy prices pushed transportation, packaging and marketing costs to unprecedented levels.

Some have now latched onto the latest iteration of the food vs. fuel debate, that by utilizing agricultural land for energy, commensurate acres must be brought into production someplace else in the world, and recent analyses assume it will all come in the most environmentally sensitive parts of the globe, wreaking havoc on eco-systems and eliminating any potential greenhouse gas benefits biofuels might otherwise provide.

These analyses ignore the complexities of the land use debate; they disregard the impacts and interplay of numerous global economic, social and political factors such as urban sprawl and dietary changes in the developing world. Moreover, they ignore both the reality and potential for increased efficiency and productivity in agriculture. Corn yields averaged 150 bushels per acre last year. But with improved technology, we will see 300 bushels per acre long before we see a bulldozer pulling into Yellowstone National Park with a permit for biofuels production.

Biofuels must be produced in a sustainable fashion. There is no justification for invading the rainforest to make way for biofuels. But that will not be necessary as long as we remain committed to a responsible path forward.

The naysayers notwithstanding, 2007 was a seminal year for the ethanol industry.

No less than 29 new ethanol biorefineries opened last year, increasing annual production capacity a remarkable 32%. The U.S. ethanol industry now boasts 140 biorefineries in 22 states across the country with a collective capacity of 7.9 billion gallons annually.

In addition, 60 biorefineries are currently under construction and at least 7 plants are expanding. When these new facilities are operational, an additional 5.5 billion gallons of production capacity will be available, bringing the industry's total production capacity to approximately 13.5 billion gallons.

One of the biorefineries that broke ground last year was the nation's first commercial scale cellulosic ethanol biorefinery. When Range Fuel's 20 million-gallon cellulosic ethanol plant in Soperton, Georgia opens, it will usher in a new and exciting era for ethanol production in the United States.

With each biorefinery that opens, of course, new technologies are employed that are making the industry ever more efficient. From solid waste fuel boilers to manure combustion to biomass gasification, ethanol plants are adopting technologies that are making us more energy efficient and sustainable. A survey of the ethanol industry conducted by the RFA found that efficiency at dry mills has improved 22 percent since the last comprehensive analysis was conducted in 2002.

Ethanol consumption in 2007 grew far beyond the 4.7 billion gallons required by the Renewable Fuel Standard (RFS) passed in 2005. Approximately 450 million gallons of imports brought total ethanol consumption to about 7 billion gallons last year, almost 2 billion gallons more than the previous year's record.

Record oil prices and octane demand drove ethanol into new markets all across the country. Working with our customers, infrastructure has expanded to accommodate this increased demand. Unit train shipments of ethanol are moving on the "Virtual Pipeline" with increasing frequency, adding efficiency and lowering the cost of transportation. The first of its kind ethanol loading facility opened in Manley, Iowa, allowing unit trains to assemble and providing efficiencies to ethanol producers without unit train loading capacity at their own facilities. More and more, however, biorefineries are adding unit train capability on site. Unit train off-loading capability is also being added. To date, there are more than a dozen destination terminals in high consumption markets, including New York, the mid-Atlantic, the southeast, and California.

2007 saw strong growth in E-85 as well. There are now more than six million FFV's on the road and more than 1,400 E-85 refueling stations. The RFA estimates a record 150 million gallons of E-85 were sold last year, approximately the same consumption as in the fast-growing biodiesel market. U.S. automakers have committed to a dramatic expansion of FFV's, with GM, Ford and Chrysler promising that at least 50% of the vehicles they produce will be FFV's by 2012. They collectively produce about 8 million vehicles a year, which means as many 4 million FFV's annually will be rolling off America's assembly lines soon.

We believe the planets are aligning to encourage a very rapid expansion of E-85. In October, Underwriters Laboratory approved a test protocol for E-85 refueling pumps, paving the way for a dramatic expansion of E-85 refueling infrastructure. And in December, a little noticed provision of the energy bill strengthened the Petroleum Marketers Practices Act, making it illegal for refiners to discourage gasoline marketers from selling E-85.

The most significant milestone of 2007, of course, was passage of the Energy Independence and Security Act. Combining significant improvements in fuel economy standards with a dramatic acceleration and expansion of the RFS, the energy bill passed overwhelmingly and was signed into law on December 19.

By requiring 9 billion gallons of renewable fuel this year, growing to more than 15 billion gallons in 2012 and 36 billion gallons by 2022, this historic legislation moves ethanol beyond a 10% blend component in gasoline. By establishing a specific schedule for advanced biofuels such as cellulosic ethanol, the bill moves ethanol beyond grain to more sustainable technologies that will maximize ethanol's carbon benefits. And by creating specific greenhouse gas reduction benchmarks for future production, the bill assures environmental progress and drives the most efficient technologies.

The Energy Independence and Security Act of 2007 charts a new course for U.S. energy policy; signaling the end of our addiction to oil, demonstrating our leadership in addressing global climate change, and putting our nation on a path that will provide economic and environmental benefits for generations to come.

An analysis of the energy bill completed by LECG found that between 2008 and 2022 the bill will:

- Add more than \$1.7 trillion to GDP;
- Generate an additional \$436 billion in household income;
- Support the creation of more than 1.1 million new jobs;
- Generate \$209 billion in new Federal tax receipts; and,
- Displace 11.3 billion barrels of oil, reducing the outflow of dollars to foreign producers by \$817 billion.

More importantly, the new RFS provisions will make the most significant deposit in our history toward the carbon debt created by the past 100 years' use of coal and oil. According to an analysis completed for the RFA, the new RFS will reduce carbon emissions by some 176 million metric tons, equivalent to removing more than 27 million cars from the road.

Some have questioned whether you are capable of meeting the aggressive targets established by the new RFS, calling it a "bridge too far." One oil company representative recently ridiculed the RFS schedule, questioned our logistics capabilities and besmirched ethanol's environmental record.

But let me tell you, I have confidence in the people in this room. I believe in the power of the markets to respond to clear signals. I may not be able to tell you whether enzymatic hydrolysis or thermo-chemical conversion technologies will prove to be the most efficient. My crystal ball can't tell me whether corncobs, woody biomass, switch grass or municipal solid waste will prove to be the cellulosic feedstock of choice. But I know that cellulosic ethanol production is closer than conventional wisdom believes, and I know the targets established in the energy bill will be met.

Already, one small cellulosic ethanol company is in production. KL in Upton, Wyoming is producing ethanol from wood waste, and is intending to expand production to other sites soon. Others will soon follow. Abengoa, POET, VeraSun, Archer Daniels Midland, Range Fuels, Iogen, Alico and Coskata all have very promising technologies. They're all RFA member companies; I'm betting on all of them!

The energy bill passed because of the leadership and dedication of a broad coalition of agriculture, environmentalists, consumers, national security hawks, and energy companies that were not bowed by the clattering class of naysayers, and steadfastly promoted the revolutionary notion that America could break its addiction to oil and that addressing global climate change is not just a slogan, it's a moral imperative. The National Corn Growers Association, the American Farm Bureau Federation, the National Farmers Union, the American Coalition for Ethanol, the Renewable Energy Action Project, the Governors' Ethanol Coalition, the Natural Resources Defense Council, the Energy and Environmental Study Institute and countless others contributed immeasurably to this success, and I thank them.

There is, of course, much work that still needs to be done. We need to assure the success of this program. That means working to assure the market can effectively respond to new demands. If we are to both feed and fuel the nation, we should be accelerating biotechnology and maximizing production of arable land. We don't need to and shouldn't encourage farming in environmentally sensitive areas, but neither should we be hamstringing farmers from bringing good farmland into production. If changes to CRP can empower farmers without damaging the environment, we need to make them.

The success of this program also means working with our customers to get the highest quality product to its destination as efficiently and safely as you always have. Ethanol is now the number one hazardous material shipped on the rail. Make sure your employees are well trained in every safety detail. Working with the International Association of Fire Chiefs, the RFA produced a fire safety video last year. We will be releasing a more detailed fire safety manual shortly. We're working with the federal railway Administration to promote the TRANSCAER program. Take advantage of these resources.

Nothing will damage ethanol's reputation and market opportunities more than questions about our product quality. Our industry is growing fast. Make sure that every gallon you produce is meeting every ASTM specification. The RFA Technical Committee is a great resource for you. We are working with ASTM, the refiners and the automotive industry on quality issues all the time. Keep abreast of these issues.

With ethanol potentially approaching the point at which it will saturate the 10% blend market, we will be working closely with stakeholders to determine the feasibility of expanding ethanol blend levels. Working with the State of Minnesota, the RFA recently completed a preliminary test program of E20 on existing vehicles. We looked at materials compatibility, drivability, and emissions. We have yet to find a significant barrier. But more testing needs to be done, and the automotive industry and small engine manufacturers must be convinced any new fuel is appropriate for use in their cars and equipment. While it's easy to point to Brazil, where much higher ethanol blends are used, as evidence that higher-level blends here can be achieved, there are differences in vehicle technology used here and there, particularly with respect to emissions controls. We need empirical evidence. We cannot risk the consumer acceptance of E-10 in a rush to E-20. At the same time, the automotive and small engine industries ought not create new canards in an effort to preserve the status quo. Weed whackers can't dictate America's energy policy. The stakes are too high.

The RFA will be working with Minnesota, other states and other stakeholders to submit a 211(f) fuel waiver this year. We are confident in our fuel, and we believe there are significant performance and emissions benefits to be gained by increasing the volume of ethanol blended into gasoline. We believe that doing so will ease the transition to E-85 markets in the future by building the capacity and infrastructure for ethanol in any form.

The biggest challenge likely to face the ethanol industry this year will be the continued attacks by those unwilling or unable to accept the revolutionary change ethanol is bringing to agricultural and energy markets. The Ethanol Promotion & Information Council is doing a terrific job of getting out positive messages. The Renewable Fuels Now Coalition is becoming a valuable resource for the media. The National Corn Growers Association has been doing a great job of rehabilitating the image of corn in the media. We should all be thanking General Motors for the positive media campaign they have been conducting for more than a year now. But, obviously, more needs to be done.

The RFA will be working with all of these groups and others to enhance our collective media efforts. But it is up to all of us to correct misinformation, promote the positive benefits of ethanol and change the discourse with respect to renewable fuels. Are you prepared to help?

Are you ready to meet the challenge of the new RFS?

Are you prepared to produce 9 billion gallons of ethanol this year?

Can you meet the targets of this energy bill?

Are you capable of breaking the code to process cellulose into fuel ethanol?

Can you get your ethanol everywhere it will need to be?

Are you ready for moving ethanol beyond a 10% blend market?

Are you committed to the technological challenge of meeting new GHG reductions?

Are you ready to accept the responsibility of being the nation's premier renewable fuel?

Are you prepared to be the agents of change we need to break our addiction to oil?

Are you ready to "become the change we want to see?"

With your continued commitment, I can report to you without exaggeration or hyperbole that the state of the U.S. ethanol industry is sound, that we are prepared to meet the opponents of change with facts, with a resolute spirit, and with renewed dedication to the proposition that together we can change our nation's energy, economic and environmental destiny.

Let's get to work.