Agriculture, Nutrition and Forestry Committee United States Senate

Hearing on Agriculture and Rural America's Role In Enhancing National Energy Security

Testimony of

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Good morning, Mr. Chairman and Members of the Committee. My name is Ron Miller and I am president and chief executive officer of Aventine Renewable Energy, and chairman of the Renewable Fuels Association. Aventine Renewable Energy supplies more than 700 million gallons of the nation's growing ethanol needs through its wholly owned plant in Pekin, Illinois, partially-owned Nebraska Energy plant in Aurora, Nebraska, and business relationships and marketing alliances.

This is an important and timely hearing, and I am pleased to be here to discuss the growth in the domestic ethanol industry, and the increasingly important role of agriculture and rural America in ensuring our nation's energy security. Ethanol today is the single most important value-added market for farmers. The increased demand for grain used in ethanol processing has increased farm income, created jobs in the agricultural sector, and revitalized numerous rural communities where ethanol biorefineries have been located.

Background

Today's ethanol industry consists of 110 biorefineries located in 19 different states with the capacity to process more than 1.8 billion bushels of grain into 5.3 billion gallons of high octane, clean burning motor fuel, and more than 12 million metric tons of livestock and poultry feed. It is a dynamic and growing industry that is revitalizing rural America, reducing emissions in our nation's cities, and lowering our dependence on imported petroleum.

Ethanol has become an essential component of the U.S. motor fuel market. Today, ethanol is blended in more than 46% of the nation's fuel, and is sold virtually from coast to coast and border to border. The more than 5.3 billion gallons of ethanol produced and sold in the U.S. last year contributed significantly to the nation's economic, environmental and energy security. According to an analysis completed for the RFA1, the 5.3 billion gallons of ethanol produced in 2006 resulted in the following impacts:

Added $41.1 billion to gross output;

Created 160,231 jobs in all sectors of the economy;

Increased economic activity and new jobs from ethanol increased household income by $6.7 billion, money that flows directly into consumers' pockets;

Contributed $2.7 billion of tax revenue for the Federal government and $2.3 billion for State and Local governments; and,

Reduced oil imports by 170 million barrels of oil, valued at $11.2 billion.

In addition to providing a growing and reliable domestic market for American farmers, the ethanol industry also provides the opportunity for farmers to enjoy some of the value added to their commodity by further processing. Farmer-owned ethanol plants account for half of the U.S. fuel ethanol plants and almost 40 percent of industry capacity.

This dynamic and growing industry is also empowering more of America to have a vital role in our nation's infrastructure. If a farmer in Des Moines doesn't want to invest the local coop, he can choose to invest in a publicly traded ethanol company through the stock market. As can a schoolteacher in Boston, or a receptionist in Seattle. Americans coast-to-coast have the opportunity to invest in our domestic energy industry, and not just in ethanol, but biodiesel and bio-products. U.S. agriculture is evolving in very important ways, and rural America is primed to take advantage of these opportunities.

There are currently 73 biorefineries under construction. With eight existing biorefineries expanding, the industry expects more than 6 billion gallons of new production capacity to be in operation by the end of 2009. The following is our best estimate of when this new production will come online.

Contribution of the Ethanol Industry to the Economy of the United States, Dr. John Urbanchuk, Director, LECG, LLC, December, 2006.

Transportation

Over the past several years, the ethanol industry has worked to expand a "Virtual Pipeline" through aggressive use of the rail system, barge and truck traffic. As a result, we can move product quickly to those areas where it is needed. Many ethanol plants have the capability to load unit trains of ethanol for shipment to ethanol terminals in key markets. Unit trains are quickly becoming the norm, not the exception, which was not the case just a few years ago. Railroad companies are working with our industry to develop infrastructure to meet future demand for ethanol. We are also working closely with terminal operators and refiners to identify ethanol storage facilities and install blending equipment. We will continue to grow the necessary infrastructure to make sure that in any market we need to ship ethanol there is rail access at gasoline terminals, and that those terminals are able to take unit trains.

Looking to the future, proposals like that of Chairman Harkin to study the feasibility of transporting ethanol by pipeline from the Midwest to the East and West coasts will also be critical.

New Technologies

The only thing more astonishing than the growth in the ethanol industry is the technological revolution happening at every biorefinery and every ethanol construction site across the country. Biorefineries today are using such innovations as no-heat fermentation, corn fractionization and corn oil extraction. With today's natural gas prices, biorefineries are also looking toward new energy sources, including methane digesters and biomass gasification.

These cutting edge technologies are reducing energy consumption and production costs, increasing biorefinery efficiency, improving the protein content of feed co-products, utilizing new feedstocks such as cellulose, and reducing emissions by employing best available control technologies.

To continue this technological revolution, however, continued government support will be critically important. DOE's biomass and biorefinery systems research and development program has been essential to developing new technologies. Competitively awarded grants and loan guarantees provided by DOE and USDA have played a very important role in developing new technology. Many of the grants that were included in EPAct, such as the biorefinery grant program, will allow technologically promising projects that would help move the industry forward become a reality. The ethanol industry encourages Congress to fully appropriate funds for these critical competitive solicitations during the FY '07 budget process.

Cellulose Ethanol

To date, the ethanol industry has grown almost exclusively from grain processing. As a result of steadily increasing yields and improving technology, the National Corn Growers Association projects that by 2015, corn growers will produce 15 billion bushels of grain. According to the NCGA analysis, this will allow a portion of that crop to be processed into 15 billion gallons of ethanol without significantly disrupting other markets for corn.2 In fact, many analysts are predicting an additional 10 million acres of corn will be planted this spring, providing enough corn from those additional acres to produce more than 4 billion gallons of ethanol while still meeting the needs of all corn markets, including feed and export markets.

In the future, however, ethanol will be produced from other feedstocks, such as cellulose. While there are indeed limits to what we will be able to produce from grain, cellulose ethanol production will augment, not replace, grain-based ethanol. Ethanol from cellulose will dramatically expand the types and amount of available material for ethanol production, and ultimately dramatically expand ethanol supplies.

Many companies are working to commercialize cellulosic ethanol production. Indeed, there is not an ethanol biorefinery in production today that does not have a very aggressive cellulose ethanol research program. The reason for this is that they all have cellulose already coming into the plant in the form of corn stover and corn fiber. If they can process that material into ethanol, they will have a significant marketplace advantage. I believe cellulose ethanol will be commercialized first by current producers who have these cellulosic feedstocks at their grain-based facilities.

New Markets

Ethanol today is largely a blend component with gasoline, adding octane, displacing toxics and helping refiners meet Clean Air Act specifications. But the time when ethanol will

U.S. Corn Growers: Producing Food AND Fuel, National Corn Growers Association, November 2006.

saturate the blend market is on the horizon, and the industry is looking forward to new market

opportunities such as E-85.

Enhancing incentives to gasoline marketers to install E-85 refueling pumps will continue to be essential. There are now more than 1,000 E-85 refueling stations across the country, more than doubling in number since the passage of EPAct. But we can do better.

Today there are approximately 6 million flexible fuel vehicles (FFVs) on the road capable of using E-85, a mix of 85% ethanol and 15% gasoline. Those six million FFVs represent less than 3% of the total U.S. motor vehicle fleet of more than 200 million vehicles. Clearly, U.S. auto manufacturers have made a significant commitment to FFV technology, and their commitment is increasing. Ford, General Motors and DaimlerChrysler have made significant strides in producing and promoting FFVs. But we can do better.

Public statements by the U.S. automakers indicate a commitment to produce 50 percent of their new vehicles flexible fuel capable by 2010. American consumers buy 17 million vehicles a year. With the U.S. automakers share of the domestic market at approximately 45 percent, about 4 million new FFVs could be on the road every single year. By 2015, FFVs on our roads could exceed 35 million, creating a potential demand for E-85 of more than 21 billion gallons.

As FFV vehicles are commercialized, it is important to encourage the most efficient technologies. Some FFVs today experience a reduction in mileage when ethanol is used because of the difference in BTU content compared to gasoline. But that debit can be addressed. General Motors has introduced a turbo-charged SAAB that experiences no reduction in fuel efficiency when ethanol is used. This is the kind of innovation the government should be rewarding in any program designed to encourage E-85 use.

Conclusion

The Energy Policy Act of 2005 and several other policies enacted by the 109th Congress clearly put our nation on a new path toward greater energy diversity and national security. Additional and more focused research, targeted incentives for E-85 vehicles and refueling infrastructure, and the continued commitment of U.S. agriculture, this Committee, and the 110th Congress will all contribute to ensuring America's future energy security.

Thank you.