Energy and Natural Resources Committee
United States Senate

Hearing on

Oversight on the Energy Market Effects of the
Renewable Fuel Standard

Testimony of

Bob Dinneen
President & CEO, Renewable Fuels Association

February 7, 2008

Good morning, Chairman Bingaman, Ranking Member Domenici, and Members of the Committee. My name is Bob Dinneen and I am president and CEO of the Renewable Fuels Association, the national trade association representing the U.S. ethanol industry. I am pleased to be here this morning to discuss the positive impacts ethanol and other renewable fuels are having on our economy and environment, and the tremendous role the Energy Independence and Security Act of 2007 ("2007 Energy Act") will have in moving renewable fuels forward.

Due to the visionary and invaluable work of this Committee, the 2007 Energy Act represents a remarkable revolution in energy policy in this country. By coupling increases in vehicle efficiency and renewable fuel use, America is taking the most immediate steps available that will have the greatest impact in securing a more sustainable energy future. The 2007 Energy Act clearly sets forth a path toward greater energy security and environmental sustainability.

Background

Today's ethanol industry consists of 137 ethanol plants nationwide that have the capacity to turn more than 2 billion bushels of grain into 7.6 billion gallons of high octane, clean burning motor fuel, and more than 14 million metric tons of livestock and poultry feed. There are currently 62 ethanol plants under construction and 8 plants undergoing expansions. 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.

America's domestic ethanol producers are providing significant economic, environmental and energy security benefits today.

In an overall environment of slowing economic growth, the U.S. ethanol industry stands out in sharp contrast. According to a report set to be released in late February from economist John Urbanchuk of LECG, LLC, the American ethanol industry is a job creating engine. The increase in economic activity resulting from ongoing production and construction of new ethanol capacity supported the creation of 238,541 jobs in all sectors of the economy during 2007. These include more than 46,000 additional jobs in America's manufacturing sector -- American jobs making ethanol from grain produced by American farmers.

Ethanol is also helping to stem the tide of global warming, today. The use of low carbon fuels like ethanol is reducing greenhouse gas emissions from the more than 200 million cars on American roads. The 9 billion gallons of ethanol we will produce in 2008 will reduce greenhouse gas emissions by more than 14 million tons, or the equivalent of taking 2.5 million vehicles off the road.[1] These benefits will only increase as new technologies, new feedstocks and new markets for renewable fuels are created.

2007 Energy Act – Energy Security Through Increased Production of Biofuels

The 2007 Energy Act provides meaningful incentives for investment in the production and infrastructure for biofuels in the U.S. Expansion of the domestic biofuels industry will provide significant economic benefits in terms of a larger and more robust economy, increased income, new job creation in all sectors of the economy, and enhanced tax revenues at both the Federal and State levels. Increased biofuels production and use stimulated by the expanded RFS will also enhance America's energy security by displacing imported crude oil. Specifically, expansion of the U.S. biofuels industry will[2]:

- Add more than $1.7 trillion (2007 dollars) to the gross domestic product between 2008 and 2022;
- Generate an additional $436 billion (2007 dollars) of household income for all Americans between 2008 and 2022;
- Support the creation of as many as 1.1 million new jobs in all sectors of the economy by 2002;
- Generate $209 billion (2007 dollars) in new Federal tax receipts; and,
- Improve America's energy security by displacing 11.3 billion barrels of crude oil between 2008 and 2022 and reduce the outflow of dollars to foreign oil producers by $817 billion (2007 dollars) between 2008 and 2022.

[1] Air Improvement Resources, Inc., February 2008.

[2] *Economic Impact of the Energy Independence and Security Act of 2007*, Renewable Fuel Standard, by John M. Urbanchuk, Director, LECG LLC (January 2008).

Finally, the 2007 Energy Act will greatly enhance the climate change benefits attributable to today's renewable fuels industry by encouraging more sustainable technologies and reducing the carbon footprint of future energy production. An analysis conducted for the RFA using the U.S. Department of Energy's existing GREET model shows that increasing the use of ethanol and other renewable fuels to 36 billion gallons annually by 2022 could reduce greenhouse gas emissions by some 176 million metric tons, equal to removing the annual emissions of more than 27 million cars from the road.[3]

The 2007 Energy Act Stimulates Cellulosic Ethanol Production

By expanding the Renewable Fuel Standard (RFS), requiring 36 billion gallons of renewable fuel be used annually by 2022, and specifically that 21 billion gallons of that goal must come from advanced biofuels, history will look back upon the enactment of the 2007 Energy Act as the moment America chose a new energy policy path. And by requiring that nearly 60 percent of the new RFS be met by advanced biofuels, including cellulosic ethanol, Congress has provided the necessary assurance for ethanol producers and investors that a market for their product will exist. As a result, the commercialization of these important next generation ethanol technologies will develop far sooner than conventional wisdom suggests.

For example, last November, Range Fuels, Inc. broke ground on a commercial cellulosic ethanol plant located in Treutlen County, Georgia. The facility will use wood and wood waste from Georgia's pine forests and mills as its feedstock. Verenium is operating a cellulosic ethanol pilot plant and research and development facility in Jennings, Louisiana, and expects to complete a demonstration-scale facility using plant matter and farm scraps like sugarcane bagasse and wood chips as feedstock to produce cellulosic ethanol in 2008 at the same site. Abengoa Bioenergy operates a cellulosic biomass-to-ethanol pilot plant in York, Nebraska that will research and test proprietary technology for use in commercial-scale conversion of biomass into ethanol. POET Energy with expand an existing corn-based ethanol facility in Emmetsburg, Iowa into a bio-refinery that will include production of cellulosic ethanol from corn cobs and stover. And Iogen plans to build a cellulosic ethanol facility utilizing wheat and barley straw in Shelley, Idaho.

A recent report by the U.S. Department of Commerce's Bureau of Manufacturing and Services, *Energy in 2020: Assessing the Economic Effects of Commercialization of Cellulosic Ethanol*, noted the commercial viability of cellulosic ethanol will strengthen the competitiveness of many domestic industries and have a positive effect on the U.S. economy. In fact, the report found that annual benefits for American consumers would total $12.6 billion if cellulosic ethanol production increased; U.S. crude oil imports would fall 4.1 percent if 20 billion gallons of cellulosic ethanol were produced in 2020, which is approximately 40 percent of current crude oil imports from Venezuela; and, the global price of oil and the domestic U.S. fuel price would be 1.2 percent and 2.0 percent, respectively, lower than projected.

In addition to the RFS, many of the other biofuels programs authorized by the 2007 Energy Act make the expanded RFS absolutely achievable. The 2007 Energy Act moves ethanol and renewable fuels beyond being just a blending component in gasoline, and guarantees that

[3] Air Improvement Resources, Inc., February, 2008.

sufficient volumes of ethanol will be available to support the meaningful expansion of E-85 and flexible fuel vehicle technology.

The 2007 Energy Act Encourages Greater Investment in Renewable Fuel Infrastructure

As the demand for fuel ethanol grows, the infrastructure available to transport, store and blend ethanol into gasoline has expanded as well. The U.S. ethanol industry has been working 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.

A new ethanol trading and distribution center recently opened in Manley, Iowa, for example, that will help the industry distribute ethanol more efficiently. There will be more than 75 ethanol plants within 275 miles of the Manley terminal in operation by the end of 2009 – representing approximately 5.1 billion gallons. The Manley Terminal LLC will have storage capacity for 20 million gallons of renewable fuels. The facility will improve the efficiency of ethanol distribution by consolidating shipment in larger 70 to 95-car unit trains, and by improving utilization of ethanol suppliers' tank cars.

Today, there is limited shipment of ethanol via pipeline. However, several major pipeline owners are considering various ethanol pipeline shipment scenarios. And the U.S. Department of Transportation has initiated a project to work with the industry to overcome barriers to pipeline shipments. Looking to the future, completion of a study on the feasibility of transporting ethanol by dedicated pipeline, as was included in the 2007 Energy Act, from the Midwest to the East and West coasts will be critical.

Technical Corrections

As with any new law, there will be technical corrections and other adjustments necessary to allow renewable energy markets to function as intended under the 2007 Energy Act. The RFA respectfully offers for your consideration the following modifications to provisions in the 2007 Energy Act that will allow the markets to work as effectively as possible.

- The 2007 Energy Act provides for public notice and comment in other determinations by the Administrator regarding lifecycle greenhouse gas emission, except for those provided in the definitions for "cellulosic biofuel" and "lifecycle greenhouse gas emissions." Notice and comment should be required for all lifecycle emissions determinations.

- The 2007 Energy Act excludes the possibility for plants using corn starch, which is defined as "conventional biofuel," to qualify as "advanced biofuel." Advanced biofuels must meet a 50 percent reduction in greenhouse gas emissions. However, one pathway

for the use of cellulosic feedstocks is for corn stover and other cellulosic material to be co-processed with corn starch. The existing provision could be interpreted as precluding the ethanol produced from such a facility from being considered advanced biofuel. Moreover, with new more sustainable technologies, it is quite possible that corn-derived ethanol may one day meet the 50 percent reduction in greenhouse gas emissions benchmark of advanced biofuels. Corn starch ethanol plants should be incentivized to reduce their greenhouse gas emissions, and reaching the targets established for other processes should be rewarded. One option is to delete the term "conventional biofuel" and the exceptions for corn ethanol from the definition of advanced biofuels. Given the strict requirements in the 2007 Energy Act, there is no reason to preclude any facilities from the benefits otherwise provided for achieving a 50 percent reduction in greenhouse gas emissions.

- To address potential supply issues of cellulosic and biomass-based diesel to meet the required volumes, the 2007 Energy Act includes specific waivers of their required volumes. However, the 2007 Energy Act also states that the Administrator may reduce the overall renewable fuel and advanced biofuel volume requirements, potentially solely in light of the reductions of these particular biofuels. These provisions arguably conflict with the criteria for such waivers under Section 211(o)(7)(A) and appear to be without regard to whether other renewable fuel or advanced biofuels are available to make up the difference. Under these provisions as written, interested parties may also lose the ability to participate in the process. There is no policy reason to allow for reductions of the overall advanced biofuel or renewable fuel requirements if there is more than adequate supply of other renewable fuels or advanced biofuels.

  Any reductions of the advanced biofuel and renewable fuel requirements should be limited to the criteria under Section 211(o)(7)(A) and any amounts of cellulosic biofuel or biomass-based diesel that are waived should be made up with other advanced biofuels or renewable fuels. In other words, any necessary waivers of cellulosic biofuel or biomass-based diesel should not reduce the required volumes for advanced biofuel or renewable fuel if other biofuels can make up the difference. This preserves the incentives for cellulosic biofuels, but accounts for the potential that the industry cannot keep pace, while preserving the overall goal of the 2007 Energy Act to require a specific amount of renewable fuel be sold each year to reduce greenhouse gas emissions and dependence on foreign oil.

- In recognition of the need and importance of E-85, the 2007 Energy Act included an expansion of the Petroleum Marketing Practices Act ("PMPA") to ensure that E-85 infrastructure could be installed at stations run by franchisees, if they chose to. Specifically, the amendment prohibits restrictions by franchisors on franchisees or any affiliate of the franchisee related to the installation of renewable fuel infrastructure and advertising and sale of such renewable fuel. However, renewable fuel is defined in the amendment to the PMPA to include only E-85 and certain biodiesels. Thus, the 2007 Energy Act's amendments to the PMPA do not address mid-level blends of ethanol.

  In addition to E-85, fuels with lower ethanol content, such as E-15 or E-20, may play an important and key role in meeting the new renewable fuel standard requirements. As

such, this amendment should be expanded to include all fuels that utilize renewable fuels in any form.

Conclusion

The enactment of the 2007 Energy Act is a testament to what we can do when we work together toward a shared vision of the future. By increasingly relying on domestically produced renewable fuels, including next generation technologies such as cellulosic ethanol, we can begin the hard work necessary to mitigate the impact of global climate change, reduce our dependence on foreign oil, and leave a more stable and sustainable future for generations that follow.

The Senate Energy and Natural Resources Committee will continue to have an invaluable role to play in making sure our nation successfully increases the use of domestic, renewable energy sources. Without question, more work will be needed and the U.S. ethanol industry stands ready to work with you to assure the journey you embarked upon with passage of the 2007 Energy bill is realized.

Thank you.