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FULL COMMITTEE HEARING ON THE STATE OF THE RENEWABLE FUELS INDUSTRY IN THE CURRENT ECONOMY

HEARING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

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FULL COMMITTEE HEARING ON THE STATE OF THE RENEWABLE FUELS INDUSTRY IN THE CURRENT ECONOMY

Wednesday, March 4, 2009

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to call, at 1:00 p.m., in Room 2360 Rayburn House Office Building, Hon. Nydia Velázquez [chairman of the Committee] presiding.

Present: Representatives Velázquez, Moore, Dahlkemper, Schrader, Kilpatrick, Clarke, Ellsworth, Sestak, Griffith, Halvorson, Graves, Luetkemeyer, Schock and Thompson.

Chairwoman VELÁZQUEZ. Good morning. I now call this hearing of the Small Business Committee to order.

In his joint address to Congress last week, President Obama made it clear that there can be no economic recovery without energy independence. Entrepreneurs are already leading that charge. Small biofuels producers are not only addressing climate change, but are helping to end our reliance on foreign oil. Just as importantly, they are creating new jobs and ushering in a stronger, greener economy.

The U.S. is now home to 176 biodiesel plants, up from just 9 in 2001. Ethanol facilities are also on the rise. Thirty-one new plants opened in the last year, with facilities spanning 26 states across the country. These businesses are generating jobs for thousands of Americans and breathing new life into rural economies. On top of that, they are making serious strides in developing cleaner, sustainable oil alter natives. Last year, production for biodiesel alone reached 690 million gallons.

But despite their recent progress and enormous potential, many of these businesses are now struggling to survive. With the price of oil relatively low, the country has been lulled into a false state of complacency. The call for renewable fuels-which once rang loud and clear-has since died down. Meanwhile, the growing recession has also taken its toll. For biofuels entrepreneurs, the effects have been nothing short of devastating.

Perhaps the greatest problem plaguing the renewable fuels industry is the diminished focus on energy prices. With oil hovering around $40 a barrel, demand for renewable fuels has fallen off considerably. Profits are down and, to make matters worse, so are investments. Most of us know it is only a matter of time before gas prices go up again. Unfortunately, many venture capitalists now

view renewable energy as a long-term investment-one that few are willing to make in this uncertain economy.

For the biofuels industry, dwindling investor interest has been compounded by the recession. Credit is drying up, and banks are not making loans. Even lending through the USDA's Farms Service Agency-traditionally a lender of last resort-has been jeopardized. Applications for FSA lending have shot up 200 percent since last year. The agency is now worried about meeting demand in the coming fiscal year.

The results of these drop-offs will be dire. Already, new construction for ethanol plants has slowed dramatically. At the same time, more than 25 facilities have closed nationwide, idling almost 2 billion gallons of fuel capacity. Businesses that have managed to survive are straining to meet even basic obligations like feedstock expenses.

Many biodiesel and ethanol providers committed to these contracts when grain and vegetable costs were at a premium. Though prices have plummeted, businesses are still locked in at record rates.

Two weeks ago, President Obama signed the American Recovery and Reinvestment Act into law. That bill includes more than $70 billion in energy measures. But while provisions within the stimulus will encourage greater use of renewable fuels, they will not address every challenge. That is why we are here today-to discuss viable fixes to the problem. Already, a number of potential solutions have been raised, from increasing the blend wall for ethanol to extending targeted tax incentives. In this afternoon's hearing, we will examine a few of those suggestions.

When oil hit $147 a barrel last summer, biofuels looked like the best way out of a full blown energy crisis. Today, they are the best way out of a dormant energy crisis. These businesses are not only creating new jobs, but they are working to ensure we are not caught in the crosshairs when gas prices go up again. That's more than energy independence-that's economic independence, and that's the new energy plan this country needs.

I would like to take this opportunity to thank all of today's distinguished witnesses in advance for their testimony and, with that, I yield to Ranking Member Graves for his opening statement.

Mr. GRAVES. Thank you, Madame Chair, and I want to thank you again for holding a fantastic hearing as far as I'm concerned because this is an issue that affects, very much affects, rural America as well as every citizen in America and you've always shown a very strong interest in small businesses both in our urban areas and in our rural areas.

Energy is the life blood of our economy. U.S. economic prosperity is closely tied to the availability of reliable and affordable supplies of energy. This is not a new issue. However, with technology improving exponentially, the energy independence discussion has changed greatly over the past few years.

The stark reality is that we import about 60% of the petroleum we currently need. To make our petroleum problem worse, we have not built a new refinery in the United States in over 30 years. It is stretching our refining capacity to the limit and affecting the volatility of energy prices.

Efforts to open up the Arctic National Wildlife Refuge and the Outer Continental Shelf to oil and natural gas exploration should and must continue, but we cannot ignore the fact that we need renewable fuels to help take the strain off of our need for imported fossil fuel energy.

It is not just the United States that is going to need more energy in the coming years. Our traditional energy supplies will be increasingly strained by dramatic growth in global demand. We need to focus on both short-term and long-term goals. Most certainly, investing in renewable fuels technology is a positive step toward energy independence. We must be forward thinking in our approach to meet our current needs and future requirements. These sources of energy could hold the key to energy independence in the future.

Over the past few years of substantial growth in the renewable fuels industry, many policymakers who might have had legitimate concerns about the industry are beginning to see the value and positive outcomes that can be associated with renewable fuel sources. These positive results are found most immediately in rural America where the difficulty in attracting jobs, investments, and maintaining the infrastructure can be more complex.

This hearing presents an excellent opportunity to learn more about the renewable fuels industry. Many of these producers are classified as small businesses by the Small Business Administration. Not unlike other industries, biofuels producers are facing difficult economic times with little available capital necessary for expansion and job creation. This is especially critical for small producers who do not have the available equity to leverage loans. The volatile economic conditions are also having a negative effect on this industry and today we hope to detail what, specifically, are the biggest impediments to growth, and offer policy options that could help the industry continue to grow.

Again, Madam Chair, I appreciate you having this hearing. It's an issue that I'm intimately familiar with and thank you.

Chairwoman VELÁZQUEZ. Thank you and I welcome our first witness, Mr. Nathan Kimpel. He's the President and Chief Operating Officer of New Energy Corp. in South Bend, Indiana. New Energy Corp. was the first large scaled green field ethanol plant built in the United States. It started in 1984. It is scheduled to produce its two billionth gallon of fuel this year. Welcome sir. You have five minutes to present your testimony.

STATEMENT OF NATHAN KIMPEL, PRESIDENT, CEO, NEW ENERGY CORPORATION, SOUTH BEND, INDIANA

Mr. KIMPEL. Good afternoon, Madam Chairwoman, and Ranking Member Graves and Members of the Committee. My name is Nathan Kimpel and as the Chairwoman said, I'm President and Chief Operating Officer of New Energy Corp. New Energy is located in South Bend, Indiana and became operational in 1984 and we are, in fact, getting ready this year to produce our two billionth gallon.

In 2008, New Energy purchased over $180 million worth of corn from local farmers, cooperative elevators and commercial grain companies. As you've already said, this is an important and timely hearing and I'm pleased to be here to discuss the unique challenges and economic difficulties currently facing New Energy Corp. and

the U.S. renewable fuels industry. Today's renewable fuels industry consists of 170 bio-refineries located in 26 different states with the capacity to produce 12.4 billion gallons of high octane clean-burning motor fuel. In 2008, the renewable fuels industry's operating capacity increased by 2.7 billion gallons, a 34 percent increase.

The U.S. renewal fuels industry is a dynamic and growing industry that is revitalizing rural America, reducing emission in our nation's cities and lowering our dependence on imported petroleum. Ethanol is becoming an essential component of the U.S. motor fuels market. Today ethanol is blended in approximately 70 percent of our nation's fuel and is sold virtually from coast to coast and border to border. Last year the U.S. renewable fuels industry produced and sold a record 9.2 billion gallons, contributing significantly to the nation's economic and environmental energy security.

The U.S. ethanol industry continues to have a positive impact on our nation's economy. U.S. ethanol producers have long been on the cutting edge of the green economy helping support more than 494,000 well-paying jobs in 2008 alone. Importantly, ethanol production provides a critical stimulus for struggling rural economies providing farmers the most important value added market for grains in more than a generation.

The economic crisis is significantly impacting sustained, continued growth and development in our industry. Recently, the U.S. renewable fuels industry have been devastated by the scarcity of both short-term credit to finance on-going operations much less the long-term capital to finance expansion and new construction. The renewable fuels industry along with all of our small business partners, the American corn farmer, have fallen victim to many of the same problems that have affected other industries including high raw material costs, but in our case, collapsing oil and gasoline prices.

Ethanol prices are partly driven by gasoline prices which are in turn driven by crude oil prices. Many input costs for producing corn are as well driven by crude oil prices. Both gasoline and crude oil reached record levels in 2008. Crude oil prices skyrocketed to $147 per barrel before sinking to below $40. According to the Energy Information Agency, gasoline use fell an estimated 3.3 percent in 2008, the sharpest decline since 1992 as prices hit record levels.

Oil led the 2008 commodity boom and corn prices followed. Oil prices have fallen due in large and part to a weak demand from a slowing world economy. Falling gasoline prices have pulled ethanol down as well putting severe pressure on revenue. However, gasoline and ethanol prices have fallen much more than corn prices over the last year.

In our company, we look at a concept called The Commodity Price Spread. This is essentially the difference between the daily market replacement prices of ethanol and corn expressed in a dollar per gallon basis.

In January of 2008, the Commodity Price Spread was enough to cover all production and debt service cost plus make a reasonable contribution to return on investment. However, by July the Commodity Price Spread had narrowed to a point where an average or model plant was perhaps covering all variable cost and making a contribution to semi-variable cost but likely not covering the fixed

cost of operation much less debt service. Since July, the Commodity Price Spread has vacillated between not even covering variable cost to making a contribution to fixed cost but rarely if ever making any contribution to debt service.

Our projection for the balance of the year solely based on futures market for corn and ethanol show little improvement. Corn input costs are established as much as a year before cash sales by the farmer actually takes place. Our suppliers tell us at today's market price they are well below their production price. Unless agriculture production costs drop substantially this year, the price squeeze between corn and ethanol may well continue into next crop year.

The RFS for 2009 which is effectively 9.5 billion gallons after imports and prior year credits are taken off is now not only the floor of demand but also the ceiling of demand. Today more than 25 ethanol plants have closed nationwide idling nearly two billion gallons of capacity.

The outlook for New Energy Corp. and the U.S. ethanol industry will depend on several factors including economic growth which is consumer spending and gasoline demand, credit availability, oil and gasoline prices. We need to assure the continued viability of the industry as it stands today as well as provide for future evolution and innovation while stimulating thousands of green jobs. To do this, access to immediate and necessary operating capital is critically important to help weather the current economic conditions facing the industry.

U.S. ethanol producers have answered the challenge to put forth in the RFS and are producing enough ethanol to fill the requirements and I might add for both this year and next year.

Chairwoman VELÁZQUEZ. Mr. Kimpel, time has expired.

Mr. KIMPEL. Okay.

[The statement of Mr. Kimpel is included in the appendix at page 33.]

Chairwoman VELÁZQUEZ. So you will have an opportunity during the question and answer period to add any comments that you might want to make.

Mr. KIMPEL. Very good. Thank you.

Chairwoman VELÁZQUEZ. Our next witness is Mr. John Howe. He's Vice President of Public Affairs for Verenium Corporation in Cambridge, Massachusetts. Mr. Howe has held leadership roles in several organizations including the Coalition for the Commercial Application of Super Conductors and the National Association of Regulatory Utility Commissioners. Verenium Corporation is a leader in the development and commercialization of cellulosic ethanol. Welcome sir.

STATEMENT OF JOHN HOWE, VICE-PRESIDENT, PUBLIC AFFAIRS, VERENIUM CORPORATION, CAMBRIDGE MASSACHUSETTS

Mr. HOWE. Thank you very much, Madam Chair and Ranking Member Graves. I greatly appreciate your welcoming me here today for a critical hearing at a critical time. I'm going to summarize my pre-filed statement with seven fairly brief points.

First of all, curbing our use of imported fuels is a massive challenge, but it is imperative that we meet it because of a convergence

of three huge factors. Our country's monthly outlays for oil imports are sapping our economic and competitive strength. We're coming to grips with the reality that a global peak in oil production will arrive in a comparatively short time. And we've awaken to the fact that uncontrolled carbon emissions have thrown our climate into a disequilibrium that could threaten much of human civilization in the future if we don't address it soon.

Low carbon advanced biofuels can help on all of these fronts. This is why they've turned in a fairly short time from being a nice-to-have option to a must have solution. Looking beyond today's anomalous short-term collapse of oil prices, we will need clean liquid fuels for the long haul. Once these new sources are commercially available, it will take years to scale them up to have a meaningful impact. We have no time to lose.

Second, advanced biofuels will be tremendous engine for small business formation and growth. This industry by its nature will rely on small scale, geographically diverse production and regionally adapted feedstolks and processes. That means that large numbers of good, non exportable jobs in small businesses all over the country will be created as suggested by the map in my prepared statement.

Third, there is solid technical progress to report. Just last month my own company, Verenium, finished commissioning one of the nation's first and indeed one of the world's largest true demonstration scale cellulose-to-ethanol plants. It's in southwest Louisiana. In January, we announced our first commercial plant in Florida that will generate hundreds of good jobs. Several competitors are likewise making good progress.

The naysayers claim that advanced biofuels are a decade away and always will be. But it's simply not true. The ambitious production goals in the RFS can be met if we marshal the sense of urgency that our national situation requires. If we stick to the commitment and don't turn back, this is truly a case where we hold destiny in our own hands.

Fourth, we must not downplay the obstacles and challenges facing advanced biofuels. Chief among these is financing. Even big established companies selling mature products find it hard to get credit in today's environment. For us, it's basically impossible. In the best of times, private lenders won't take technology risk on energy projects.

So we have reached a financing logjam. First of a kind, commercial scale projects are essential to establish the track record upon which private capital can lend in the future. There is basically no other place to go for funding today except to the government for the loans, grants and loan guarantees to make such projects possible.

Fifth, there are other complex risks in making advanced biofuels a commercial reality, the typical challenges of developing complex technological processes. We're having to work with the Ag sector to put together a fairly complex new supply chains to plant produce harvest and collect new kinds of feedstocks.

There's the off-take market. You hear a lot today about the ten percent blend wall. Between legislation and regulation, our industry needs to get clarity on just how the ramp-up of biofuels to 36 billion gallons under the RFS squares with a quota under EPA reg-

ulations that will max out at about 12 billion gallons of ethanol. Lifting the blend limit to 13 or 15 percent will help, but it will merely postpone the issue for a couple of years. It offers no certainty at all for advanced biofuels producers who are expected to produce the lion's share of future new capacity.

And then let's face it. Global oil markets are not exactly textbook Economics 101. They feature extreme volatility, strategic behavior and outright manipulation of price and quantity by large actors like OPEC whose agenda is to prevent biofuels from being established as a viable alternative source. As an American, I can think of few better reasons why we should move aggressively to increase our use of biofuels than the fact that OPEC wants us to think it's a bad idea.

Sixth, let's not let this long list of challenges deter us. Let's focus on the vast potential inherent in advanced biofuels to renew our economy, create jobs, protect our environment, improve domestic security and global security for as these technologies go global they will democratize the balance of power in energy production and use around the world. That potential is real. I've included the summary of an excellent new report by Sandia and GM that finds that a large scale cellulose/ethanol industry meeting about one-third to about one-half of our liquid fuel needs is feasible and affordable within in a surprisingly compact geographic footprint. The key is a sustained, consistent policy commitment. A halfhearted approach won't do.

If I may ask you for just a moment to close with a seventh point and personal observation, our economic calamity arose from many complex factors, but I believe the surge in world oil prices over the last four years is what triggered the avalanche. It drained our economy of $1 trillion of our families' accumulated wealth. It showed us that if we don't bring our dependency on oil imports under control, we will remain weakened for a long time.

Given the realities of climate change and impending peak oil, there is no path to a truly sustainable recovery for our country that does not include commercially viable, scalable, environmentally sustainable technologies to produce liquid fuels from domestic feedstocks, in other words, advanced biofuels.

The challenges in getting there are severe, but failure is not an option. Thank you very much.

[The statement of Mr. Howe is included in the appendix at page 37.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Howe.

And our next witness is Mr. Manford Feraci. He's the Vice President of Federal First for the National Biodiesel Board. Mr. Feraci runs the Washington, D.C. office spearheading the organization federal regulatory efforts. The National Biodiesel Board is national trade association representing the biodiesel industry for research and development in the United States.

Welcome.

STATEMENT OF MANFORD FERACI, VICE PRESIDENT, FEDERAL FIRST FOR THE NATIONAL BIODIESEL BOARD

Mr. FERACI. Madam Chair, Ranking Member Graves, Members of the Committee, thank you for holding this important hearing today

and I appreciate having the opportunity to testify on behalf of the National Biodiesel Board.

As you said in your opening statement, the National Biodiesel Board is the national trade association for the U.S. biodiesel industry and we represent everything from biodiesel producers to feedstock providers to fuel marketers to technology providers. So we really do represent the whole waterfront, as you would say, of the entire industry.

Biodiesel itself is a diesel replacement fuel. It's made typically from agricultural oils, waste greases such as yellow grease, also more commonly known as restaurant grease, and animal fats. It is refined to hit an ASTM D67 fuel specification. We comply with Tier 1 and Tier 2 emission requirements of the Clean Air Act.

In the marketplace, the fuel is typically used in five percent blends in with conventional diesel fuel. But it can be used to the levels up to 20 percent. It's distributed through the mainstream existing petroleum infrastructure that we have right now. We're in about a little over 40 distribution terminals across the country and we're really excited that there's two major pipeline companies so far that have actually run biodiesel through a pipeline and we think that this holds a lot of potential to get our fuel distributed in the mainstream infrastructure which ultimately is in the nation's overall policy goals.

There are significant public policy benefits associated with the use of biodiesel, the first being let's talk about energy security and reducing our dependence on foreign oil. With biodiesel production what you're getting is you're getting additional fuel production capacity and new fuel that's being added to our overall infrastructure. The 690 million gallons that we produced in 2008 displaced 38.1 million barrels of petroleum. In addition, it's also worthwhile to mention that biodiesel is an extremely efficient fuel and that you get 3.2 units of energy for every one unit of energy it takes to produce the fuel.

We're good for the environment. We've reduced direct carbon emissions by 78 percent compared to conventional diesel fuel. That's the equivalent in 2008 of removing 980,000 cars from the roadways.

We have literally no sulfur emissions and if you talk about water use the water that was used to produce biodiesel in the United States last year was the equivalent that was used to maintain two large golf courses. So we are very efficient when it comes to that.

We're creating jobs and economic opportunity in rural America. In 2008 alone, we supported over 51,000 jobs, added over $4.2 billion to the nation's economy, generated $866 million in tax revenue for state, local and federal government. If we hit our potential which we estimate to be about 1.77 billion gallons of production we'll support over 78,000 jobs and add over $6.6 billion to the overall economy.

The other thing that I always thing is worthwhile to mention is that the existence of the U.S. biodiesel industry right now is really the driver that is encouraging this investment in some of the next generation feedstocks that people have heard about, for example, algae which we think holds great potential as a lipid source.

There's a lot of research that's going on in it right now to make that commercial.

Right now, in the advanced biofuels component when you're talking about biomass based diesels, we're really the only industry out there that is at commercial scale and we are the ones that are the ones that are the ones that are driving that research.

All that said and all the success that we've had though is really in danger right now because our industry is facing some pretty severe economic hardship right now and it's a perfect storm of factors, lack of access to capital which is not unique to our industry, volatility in commodity markets, and lastly we've had uncertainty relating to federal policy which signals that the support for biodiesel going forward is tenuous at best.

Now we're not asking for new programs. We're not asking for huge new initiatives. What we're asking for moving forward is the maintenance of what we have now because it's been working.

The first thing that's vital to our industry is the biodiesel tax initiative. It achieves the goal of making our fuel price competitive with diesel fuel in the marketplace. It's a dollar per gallon tax incentive. So by making us price competitive, it makes it easier for us to market our fuel and get greater infrastructure and I think greater penetration in the fuel stream. Unfortunately we were pleased that the tax incentive was extended for one year through 2009, but the very short-term duration of these extensions are really drawing into question whether the commitment to biofuels.

The second thing to mention real quick is we need a workable, renewable fuel standard. The 2007 Energy Bill put in for the first time a diesel replacement. It requires the replacement of diesel fuel in the marketplace with low carbon fuel. We're ready to meet that requirement. Unfortunately, the process that EPA is going through right now could have the effect of making it nearly impossible to meet those standards and I'd love to answer a question about that. I know my time is almost up here, but I would love to get more into that if we have the opportunity during questions.

Thank you very much for the time.

[The statement of Mr. Feraci is included in the appendix at page 44.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Feraci.

Our next witness is Mr. Ron Litterer. He's the Chairman and past President of the National Corn Growers Association. As a representative of NCGA, Mr. Litterer has advocated development of biotechnology, emphasizing the importance of responsible and accountable management. The NCGA is a producer directorate trade association headquartered in St. Louis that represents the interests of more than 30,000 farmers.

STATEMENT OF RON LITTERER, CHAIRMAN, NATIONAL CORN GROWERS ASSOCIATION

Mr. LITTERER. Thank you, Madam Chair, and distinguished Members of the Committee. Thank you for the opportunity to testify today on behalf of the National Corn Growers Association regarding the state of the renewal fuels industry and the current economy.

My name is Ron Litterer. I'm a farmer from Greene, Iowa where I grown corn and soy beans and I also have a hog finishing operation. I appear before you today as a grower and Chairman of the NCGA Board representing more than 32,000 growers from across the country.

For more than 20 years, NCGA has worked side by side with farmers, industry and government to build the ethanol industry from the ground up. Through our efforts corn growers across the country and the ethanol industry have helped America move closer to energy independence.

Our industry has been and is currently a major force in the revitalization of rural American by creating green jobs and by stimulating economic activity in our communities. However, the corn ethanol industry along with many others is feeling pressure from the current economic downturn in the U.S. and world economies. It is imperative that at a time when our country is facing a worsening economic crisis we recognize the significant role of the existing grain-based ethanol industry has in promoting not only energy independence but a more stable and prosperous U.S. economy.

During these uncertain economic times, corn growers and other Ag producers continue to face a number of serious challenges. We along with many industries continue to face a very volatile marketplace. Over the past three years, the price of corn has seen dramatic fluctuation. The decrease from record highs in 2008 have been dramatic with prices falling by more than 48 percent over the past eight months.

Despite tough economic times, corn production is becoming increasingly more efficient. Today biotechnology enables farmers to apply fewer inputs to produce larger crops on the same land. Currently, it takes about 40 percent less land to grow a bushel of corn than in 1987 and energy use to produce a bushel of corn has fallen by an average of 50 percent.

According to Keystone Center's Field to Market Report released January 2009, the production of corn in the U.S. has made significant measurable improvements and reducing energy, water, land use, and carbon emissions. In order to maintain our sustainability, improvements at that production level is imperative that the corn ethanol industry continue to grown and prosper.

There is no doubt that rural America along with the rest of the country is undergoing a time of tremendous economic challenge. It is for this reason we would like to highlight the important impact that farmer-owned, homegrown fuel production has in bringing opportunity to the main streets of rural America.

The role of the American farmer is changing, growing to encompass providing food, fiber, feed and fuel for our country. With the help of the U.S. biofuels industry our nation's rural economy is providing more opportunities for farmers through homegrown, renewable energy development.

However, the well-being of our industry is threatened today by the declining state of our national economy. NCGA feels strongly that the continued economic vitality of the U.S. renewable fuels industry is crucial for attracting the investment in research and development of second generation, renewable feedstocks. For that reason, it is imperative that the existing grain-based ethanol industry

and the accompanying infrastructure that has been built around that industry continue to prosper and remain viable in order to serve as a bridge for the next generation of biofuels.

In conclusion, NCGA sees the grain-based ethanol industry as a critical part of the domestic energy security. It's inclusion as part of the nation's energy policy has strengthened and further diversified our nation's fuel supply in a time of global volatility and increasing demand for energy. Finally, despite these trying times, corn growers will continue to meet the growing demands of food, feed and fuel in an economical and environmentally responsible manner.

I would like to thank the Committee for its time and look forward to any questions you may have.

[The statement of Mr. Litterer is included in the appendix at page 49.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Litterer.

And now I recognize a gentleman, Mr. Graves, for the purpose of introducing our next witness.

Mr. GRAVES. Thank you, Madam Chair. Our next witness is and by the way you have a very distinguished group of witnesses today.

Our next witness is Brooks Hurst. Brooks and his family farm in northwest Missouri, 3,000 acres and their family is very active in biodiesel and ethanol production. Brooks himself serves on the board of directors for the Missouri Soy Bean Association and also on the board of directors of the Paseo-Cargill Biofuels Plant which produces 30 million gallons of biodiesel a year and 40 million pounds of edible food grade glycerin.

So, Brooks, thanks for being here.

STATEMENT OF BROOKS HURST, BOARD MEMBER, MISSOURI SOY BEAN ASSOCIATION AND PASEO-CARGILL BIOFUELS PLANT

Mr. BROOKS. Thank you, Mr. Graves, and I would also like to thank Madam Chair and Ranking Member Graves and all the other distinguished Members of the Committee for allowing me this opportunity to talk to you today about the biofuels industry.

As Mr. Graves stated, I'm a farmer from northwest Missouri and I am a board member of a biodiesel production facility in Kansas City, Missouri and then I'm also a member and investor in a small ethanol plant in the town of Craig. So I've seen the great benefits that it brings to the small rural communities, close to home. The Craig ethanol facility, for instance, is about a 20 million gallon plant. So it's a really small plant. It has 300 farmer investors and so it's very important to the farmers around their markets.

I also want to thank Madam Chair and Ranking Member Graves for your opening statements, the depth and understanding that you have of the situation that we're facing and so I will kind of just hit a few highlights of my written testimony since you obviously understand a lot of the problems we're facing.

One of the things that I would like to say is that we would like to extend as Mr. Feraci pointed out the biodiesel fuels blenders credit. One of the issues that is facing us right now is in a volatile market which we've all heard about the volatile markets. It really helps to be able to lock in prices. As we go forward into the uncer-

tainty of not knowing whether there's going to be a blenders credit in the year 2010 it makes it really hard in order for our facilities to lock in contracts that we can lock in at a profit.

Another advantage I would like to point out the renewal fuels industry is that it is small producer owned plants scattered out across the country and one of the benefits this gets you is a catastrophic weather event like Hurricane Katrina doesn't affect biodiesel or ethanol production. We still go on producing renewable fuels for our country to use.

I would also like to reiterate Mr. Feraci an issue or urge the speedy implementation of the Renewal Fuel Standard that Congress passed in the latest energy bill. I realize there are a lot of details to be worked out, but I think it's very crucial that we have a domestic impetus for demand. As everyone is well aware right now, the EU has embargoed biofuels, biodiesel, going into the European Union and we're working on trade talks to get that resolved, but there were several shiploads of biofuel sitting in the coast not being able to be exported. So not only do we need to work that trade issue out, but the renewal fuel standard would really help increase our demand domestically and making that important.

I would also like to say that we have a byproduct of biodiesel which is glycerin and Mr. Graves mentioned that we have refining capacity in the Paseo-Cargill facility in Kansas City, but there are a lot of biodiesel production facilities that do not have the capability to refine glycerin. But it can be used as a fuel. In fact, there's been tests that it's a very effective fuel additive in No. 4 diesel and if we could establish, get the Energy Department to establish it as a fuel eligible for the biodiesel fuel credit I believe that would help set a floor for one of the critical byproducts of the biodiesel production.

And with that, I'd like to say that we as a nation stand at a crossroads. The decisions that are made today will impact the country for years to come. It's my hope that my testimony will help demonstrate the importance of the biofuels industry and your Committee will consider my recommendations. It's crucial that we work together to ensure the U.S. biofuels industry continues to play an important role in rural development and growing our fuel supply.

And with that, I'd again like to thank you, Madam Chair, Ranking Member Graves and all the other Members of the Committee for this opportunity to testify before you today and if you have questions, I'd be glad to answer.

[The statement of Mr. Hurst is included in the appendix at page 54.]

Chairwoman VELÁZQUEZ. Thank you. Thank you, Mr. Hurst.

I would like to address my first question if I may to Mr. Howe. President Obama reaffirmed his commitment to renewable fuels and energy security in his address to Congress last week and while there is tremendous opportunity from ethanol production from biomass we are not there yet. So can you talk to us about given the present economic situation that we're in, what will it take to get cellulosic ethanol to the marketplace?

Mr. HOWE. Madam Chair, I believe the key step that we have to take is to achieve some successful I would call proto-commercial facilities. That is full commercial scale, first of a kind. These projects

have not been built at commercial scale yet in this country. Our company has undertaken a significant private investment of $80 million to demonstrate a demonstration scale that's about on a log chart halfway from pilot to commercial. That was a major commitment that we made with our own shareholder funds.

But to get to full commercial scale which we believe is in the range of 30-40 million gallons per year, we're talking investments of $200-$300 million if we can achieve success. I think we can't have a halfhearted approach. We need to decided we're going to make a full commitment to a handful of proto-commercial facilities, establish the track record of reliability, identify what the problems are and then I'm confident as the economy returns private lenders will be able to step in and help the scale up.

Chairwoman VELÁZQUEZ. With the new provisions that are in place in the Farm Bill, how long will it take before we can achieve full scale commercialization?

Mr. HOWE. Well, as I think about the Farm Bill, I think of three provisions that were especially important. There is a cellulosic-ethanol producer tax credit of $1.01 per gallon, very helpful. Unfortunately it expires in 2012 and given the time frame that's really not going to be an effective inducement for new capital investment. So I would recommend that expiration date be extended for five-six years for example to really provide an incentive to attract some new investment.

A second program that I think offers tremendous promise is the Biomass Crop Assistance Program. This will provide an inducement for agricultural producers, growers, landowners, who are by and large a fairly conservative lot. They may not want to move away from existing growing programs where they have subsidies, insurance programs, into a brave new world where those programs don't exist.

So we need to get the BCAP program up and moving. I know there has been some concern about it, requests for an environmental impact statement that could delay it. Again, I think we need to make a commitment to do this at some significant scale.

The third is the Loan Guarantee Program which the USDA is putting in place and that program needs to be funded robustly and the rules need to be looked at in order to make it feasible for private lenders to get behind projects.

Chairwoman VELÁZQUEZ. Thank you, Mr. Howe.

Mr. Kimpel, you mentioned the immediate need for financing to cover daily operating expenses. As part of the Economic Recovery Bill, this Committee created a stabilization program to address those challenges and that initiative will allow small firms to take interest-free loans, those helping the businesses that you talk about whether the recession and pay down existing debt. Would you agree that this kind of program will be useful for the ethanol industry?

Mr. KIMPEL. Yes. Absolutely, it would. But while we are still considered small business, the scale of our business is mammoth. To build a 100 million gallon ethanol plant today, if anyone would build an ethanol plant today, is probably someplace in the neighborhood of $200 to $250 million. Operating cost today in our indus-

try is probably someplace between $300 to $400 million. So the numbers are absolutely massive.

We also have as John had referred to here the availability of loan guarantees. One of the interesting things about loan guarantees at 65 or 75 or 80 percent is that you can't even get a bank to look at you unless you have somehow a 100 percent. So even areas that have the capacity to take advantage of loan guarantees are going untapped simply because nobody will loan anybody anything.

Chairwoman VELÁZQUEZ. I guess that we need to talk to some of the banks who are taking TARP money and see if they will be willing.

Mr. KIMPEL. Yes.

Chairwoman VELÁZQUEZ. Since those loans are guaranteed by 65 to 70 percent in the case of USDA and up to 85-90 percent under SBA. I guess that we need to bring the banks to talk to us and see what else it will take.

Mr. Litterer, less than two years ago, this Committee held a hearing on renewable fuels. At that time, we learned about the small business boom in ethanol and biodiesel production. We also learned about the rural rejuvenation taking place as a result of that boom. Clearly, the picture has changed dramatically. What will it take for small producers to overcome these challenges and do you believe that the result build-up in capacity was too rapid?

Mr. LITTERER. First of all, I think we have to recognize that right now the most limiting factor to small producers is access to capital. That is an overriding issue and it's not just this industry. It's a lot of industries in our country. So if we could get that problem fixed, I think that would help a lot of producers.

The other part of that is the pricing between gasoline and ethanol. If that would change, that would dramatically change the outcome for ethanol producers.

As far as the build-up of capacity, I don't think any of us had a crystal ball to see what was going to happen with our economy. There's no question we were trying to meet a demand for phasing our MTBE. We met the challenges. We expanded. We believe we have a product that needs to be here long term for replacing imported crude oil and I think if we all had a crystal ball maybe we would have done some things differently, but looking at it at the time we think we did the right thing and I think the industry can rebound from this if we can get our credit situation solved.

Chairwoman VELÁZQUEZ. Okay. Thank you.

Mr. Feraci, I know that your board has been supportive of the renewal fuel standard two and we all know that they are still in its regulatory phase and the good thing about it is that it will recognize biodiesel fuel for the first time. In the context of the recession, what will be the proper implementation of RFS 2? What will that mean for your industry?

Mr. FERACI. Thanks for the question. The Renewal Fuel Standard, proper implementation of this, to have a program that is going to be workable, is absolutely vital to our industry. It really could be a make or break for us right now and given the way things are out in the economy and the way the market conditions are.

RFS 2 the thing about it that was—From our industry's perspective, it was so groundbreaking. For the first time you have a re-

newal requirement in U.S. diesel fuel that you didn't have before and it's a component of the advanced biofuel schedule and you ramp up from 500 million gallons in 2009 to one billion gallons in 2012 and one of the requirements of that fuel is that fuel to qualify for that component of the program it has to reduce greenhouse gas emission by 50 percent.

Now we have well-founded data that's over a decade old and has been refined consistently that shows when you look at direct emissions associated with biodiesel you get a 78 percent reduction.

What our concern is right now is that the entire advanced biofuel schedule, the first component of it to roll out which is this biomass based diesel component, could be in jeopardy if the EPA doesn't implement this in a correct way. What we're concerned about is that due to some of the additions that they're throwing in with the calculation of greenhouse gas emissions you could have the effect of essentially disqualifying all vegetable oil from being used as a feedstock to meet what is the very first component of the biomass based diesel schedule and if you do that just quite frankly you simply don't have the feedstock to meet the program and the first component of the advanced biofuel schedule that rolls out is a failure. So it's imperative to us that this be done correctly.

Chairwoman VELÁZQUEZ. Do you have an ideas as to when EPA will implement it?

Mr. FERACI. By statute, they were supposed to have a final rule in place by January 1 of this year. Now they clearly haven't done that. Based on conversations, we assume that we're going to see the NOPR here maybe within the next couple weeks and we certainly want to see that process move forward because getting a program up and running and that's workable is absolutely vital to us. But it has to be done in a correct way.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Graves.

Mr. GRAVES. Thank you, Madam Chair.

I want to kind of-I guess for everyone's interest-point out that the nice thing about biofuels whether it's ethanol or biodiesel, they're products that work and we have them right now. These are products that have to be further developed. These aren't products that have to be dreamed up or come up with. These are products that work right now and every gallon of biodiesel or ethanol that we use is a gallon of petroleum we don't have to find somewhere else.

Ethanol can be produced from anything. It can be produced from corn. It can be produced from sugar. It can be produced from cellulose, anything that ferments. If it ferments, you can make ethanol out of it. And biodiesel is vegetable oil. That's what it is which kind of brings me to the environmental impact of biofuels.

If you crack open a shipload of petroleum in the ocean some place you have a major environmental problem. If you crack open a shipload of ethanol, it's completely water soluble because it's alcohol or vegetable oil. You have a much, much different issue on your hands. That's the reason these products are so good.

But we have an industry that is struggling and we have a lot of small plants out there. The vast majority of them as of recently we've had private investment in them, but for the most part they're

farmer owned cooperatives. It's just a bunch of farmers getting together to raise capital and now they're caught up in the credit crunch because there's not a lot of credit available out there.

So now I've made my soapbox pitch. But I do want to ask about the blenders wall that we have out there because right now it's ten percent of an ethanol blend and in our farm I know we run about 30 percent ethanol blend. What we do is go out and buy E85 which is an 85 percent blend. We bring it back. We blend it out in our own fuel tanks and get about a 30 percent blend which my mother uses in her car all the way to the trucks on the farm that we use. Biodiesel we've used as much as a 50 percent blend in our tractors with no horse power loss whatsoever. So you can go much, much higher without any modifications to the system.

But my question is how much impact is it going to have if we can make that jump to say 15 percent and I just think, Mr. Litterer, you may have mentioned it or somebody mentioned it but the question is actually for all of you. How much impact is that going to make when it comes to demand and helping out if we make the jump, say, to 15 percent ethanol blend and why can't do that? What is the reason for the 10 percent wall that we have?

The same thing in biodiesel. If we set the bar higher. There is no reason why we shouldn't be able to do that. And again every gallon of biofuels that we use is a gallon of petroleum we don't have to find and I would rather be dependent on U.S. farmers than I would Saudi Arabia for our fuel any day. My question is what can we do and how big a challenge is that going to be to move that blenders wall up the scale for all those products and I'll start with you, Mr. Kimpel.

Mr. KIMPEL. Mr. Graves, we need to take you along on our next visit to see the automobile companies.

There are obviously regulatory issues, but one of the issues that has been brought up to us every time that we talk to the automobile companies is exactly what you have talked about and that's the warranty issues and perhaps there are some legitimate issues there.

But it is critical, absolutely critical, that we solve the blend wall and perhaps we're going to do it in steps. Perhaps it's going to be 12 percent and then 15 percent and then 20 percent and whatever it takes to get us to the 35 to 36 billion gallons that we so desperately need to solve these issues that we've been talking about here today.

But there are a number of initiatives that are going on as we speak. We have our partners in the industry, the Ag community, the Department of Energy, Environmental Protection Agency, USDA, all are actively involved in this. But taking that first leap and getting off the arbitrary limit that was established years ago at ten percent is critical.

Several years ago, we had 140 billion gallons of spark ignition motor fuel in the United States. Ten percent of that if you get 100 percent market penetration doesn't even get us to where we need to be at the end of the conventional renewal standard much less get into the cellulosic and advanced biofuels. It is critical and it's critical also in the sense that we don't have to rail the stuff to every single corner of the country.

Mr. GRAVES. Mr. Howe.

Mr. HOWE. Thank you very much, Mr. Graves.

I'll pick up where Mr. Kimpel was just speaking about. We absolutely should go forward. We should push this limit as far as the science will justify. I know there have been concerns expressed by auto manufacturers about warranty on legacy vehicles, small engine manufacturers, boat operators and so forth. Those considerations need to be taken into account, but I'm not sure that they should dominate the issue. If there's a way that we can provide fuel that is a higher fraction of gasoline for the lawnmowers and weedwackers of the country most of the auto fleet will be able to use richer blends I think over time or can be designed to use richer blends.

But ultimately down the road we can get a few more percentage points that will accommodate growth in grain ethanol in the next five, six, seven years. The RFS schedule calls for much higher use which is to be from cellulosic sources. So I believe that that fix does not really address the long-term challenge that we face.

As I see it, there are only two other options. One is a complete change of chemistry to other kinds of molecules such as biobutanol, the problem being that the chemists have not determined that we can produced biobutanol that has as favorable an energy balance or a carbon balance as ethanol does. And the other alternative is E85. If we can make the kind of commitment to E85 that Brazil has made to all ethanol vehicles we can have essentially limitless growth or dramatic growth in the use of biofuels in the future of this country.

I see this as an issue of standards. This is Windows and Mac. You can't say that Mac is inferior to Windows. In fact, a lot of people think it's a better operating system. But the problem is one of compatibility. So we need to look at how we can accommodate this new fuel for the future rather than necessarily adjust to the legacy fuel.

Mr. GRAVES. Mr. Feraci.

Mr. FERACI. From the biodiesel perspective, the issue is a little bit different because they're different fuels and different spaces in the economy. But overall as an industry our overall goal is to try to get five percent displacement in the overall U.S. diesel pool and from the macro sense the first real tangible step we can take is get the RFS 2 implemented in a successful way.

But as an industry and this has been going on for some time we work pretty closely with engine manufacturers to try to get these higher level blends that you're talking approved for engine warranties. Right now, B5, everyone warranties B5 now and as a matter of fact we went through the process as an industry at ASTM to have a change in the D975 diesel fuel spec which is just conventional diesel fuel that if you have spec biodiesel up to B5 blend that's blended in with conventional diesel fuel it's just deemed to be D975. It's not some other sort of designation. So if you pair that with pipelines and other sorts of fuel infrastructure that's going to give you a significant amount of penetration into the fuel infrastructure.

But getting up to B20, some manufacturers warranty. Some don't. We're constantly working with them to try to get them to do

it because like you we agree. We think you can do it and have no detrimental impact on engines at all.

Mr. GRAVES. Mr. Litterer.

Mr. LITTERER. I am not going to repeat what our first participants have said, but just to add to, I think that we have to address this very shortly and EPA is going to be key in this because that's where the science is going to be researched and they need to prove it. It's going to take maybe up to two years to get it implemented once the decision is made. So it's something that we need to work on immediately. It's one that if we're ever going to go to second stage ethanol production, the cellulosics, we have to get this issue resolved.

Mr. GRAVES. Mr. Hurst.

Mr. HURST. Thank you, Mr. Graves.

I also wanted to state the Underwriters Laboratory came out two weeks ago and basically said that they, which is an independent third party verification, could see no problem with 12, 15 percent blend in any of the pipelines, in any of the infrastructure we have currently in introducing a 15 percent blend. So I thought that was important factor.

And I also wanted to touch a little bit on biodiesel. One of the attributes of biodiesel is since we have eliminated sulfur, even a two percent blend increased the lubricity for your engine. So actually biodiesel, if you put a little bit of biodiesel, it's better than petroleum diesel right now for the lubricity.

Mr. GRAVES. Thank you, Madam Chair.

Chairwoman VELÁZQUEZ. Thank you.

I would just like to ask you a question. What will be the maximum amount and you are suggesting to increase it from 10 to 12, 15, that will make it compatible with today's cars and infrastructure?

Mr. HOWE. We need to defer to testing to determine that number. I don't—We don't have expertise.

Chairwoman VELÁZQUEZ. Okay. Mr. Sestak.

Mr. GRAVES. It's 30 percent on our farm. We know that.

Mr. SESTAK. Thanks, Madam Chairwoman.

Could I ask you, sir? Go back to RFS. What do you see as the purpose of RFS? Its policy purpose?

Mr. FERACI. I would say it's multi-faceted. From our perspective, you obviously get the energy security goal of displacing petroleum with renewable fuel. In our case, that would be biodiesel and increasing the amounts that you're getting on that side as well. Another stated goal of it is to have not only you're displacing petroleum but you're addressing the whole issue of climate change as well.

Mr. SESTAK. With that in mind, with what you said in your concerns, are you all right with a life cycle cost approach of it? I mean, was that what your problem was with the life cycle cost or is it the discount rate that they're trying to use?

Mr. FERACI. It relates more to the whole idea of indirect land use changes and here's what our specific concern is.

Mr. SESTAK. In short, you don't do soybeans. Somebody else is going to soybeans and you have to take that cost in.

Mr. FERACI. Yes, the idea that U.S. agricultural in particular has been pretty stable and it's extremely sustainable. It's somehow attributed with having deforestation in South America for example.

Mr. SESTAK. But if the goal as you said is climate, shouldn't we take that into account?

Mr. FERACI. We should take it.

Mr. SESTAK. Up until now, ethanol has by and large not been performance-based criteria. The more you build the more subsidy you get. I was taken with RFS because it's the first time we've have a performance-based criteria. But part of that performance-based criteria is climate change.

Mr. FERACI. Right.

Mr. SESTAK. So why not take an indirect land use?

Mr. FERACI. We don't have an issues with taking into consideration indirect. By statute, you have to. In the RFS, it says that you have to account for significant indirect land use changes.

Mr. SESTAK. But your problem is that-

Mr. FERACI. Our issue relates to the science of it. Right now, we know how to measure direct emissions.

Mr. SESTAK. Right.

Mr. FERACI. We have a great model that's been out there for 10 years now and that model has been refined over time to show a pretty definitive result across the board. The science of indirect land use change is so inexact right now that you could really put some false attributes on some fuels that aren't accurate. As a matter of fact, the Europeans in their renewables directive took a close look at this issue and they decided just to push it down the road in terms of having to do the indirect land use change calculations.

We have no problems with that because we think at the end of the day that you're going to have a positive attribute and we're not going to have a negative impact on it. But what we do have an issue with is a science that's very undefined, unreliable and inexact at this moment attributing something negative to a biofuel that's really not there.

Mr. SESTAK. We had looked at the RFS. It's not a cap in trade. It's more of a floor in trade. But my question I guess then is what did you think about the discount rate and trying to trade off bad action today for bad action in the future.

Mr. FERACI. We're not sure. I mean we haven't seen the rule yet in terms of what we're talking. They had a stakeholder briefing, EPA, with various groups. We haven't seen what they're going to do on the discount rate. By statute you're going to have to be compared to, our fuel is going to be compared to, 2005 emissions associated with diesel fuel and we're going to have to just play in the statute.

Mr. SESTAK. I agree that-Yes sir.

Mr. LITTERER. Could I just add a comment about the land use issue?

Mr. SESTAK. She's real tough on my time. No, go ahead.

Mr. LITTERER. That's all right.

Mr. SESTAK. I'm only kidding.

Mr. LITTERER. Just simply that in corn production our production is not static and it never has been. If you go back historically, we've about a two percent growth rate in corn production per acre

per year. So in other words we can meet the growing demand for corn without adding a lot of additional acres and that is a key that I think a lot of fundamental of this research that is being left out of the picture and the equation that needs to be really considered. In fact, if you look at the tech providers in producing seed corn today, they say that we're even going to accelerate the rate of that growth because of the technology going into seed. So that goes to the science and the accuracy of the formulas they use in land use.

Mr. SESTAK. That's a good point. The reason I asked is I've always kind of felt that as valuable as ethanol and particularly now as we get into advanced fuels are that the lack of having a performance-based criteria although it helped economically it was about you billed more, you get more. It wasn't about does one of your plants use coal or natural gas. I mean there's a difference and you get the same tax subsidies for both. I'm not sure we-So that's why I was taken with RFS. But I understand it's the science of the ones that you have, not the concept.

Chairwoman VELÁZQUEZ. Time expired.

Mr. SESTAK. Thank you.

Chairwoman VELÁZQUEZ. Mr. Luetkemeyer.

Mr. LUETKEMEYER. Thank you, Madam Chairwoman.

I just have one quick question for Mr. Howe. You made a comment awhile ago with regards to you had some suggestions with regards to SBA lending that you think would be able to help facilitate some of the loans to some of the plants. Could you elaborate on it just a little bit?

Mr. HOWE. I did mention the USDA loan guarantee program. The concern I was alluding to is there are restrictions in the terms of that program that limit the rate at which a lender for the balance of the non guaranteed portion that limits the rate that the lender can charge and also, of course, that balance is unguaranteed. The results of those conditions in the rule is we have found, and we've extensively tested the market, that there's very little appetite to participate in this program right now, certainly under today's conditions. So we believe there either needs to be a guarantee of a higher fraction or 100 percent of the loan and some relaxation on the conditions on what the lender can charge for the balance of the loan. Because right now, it's a program that it's like we're 200 feet offshore and we're getting thrown a 100 foot rope. It's just not going to do the job.

Mr. LUETKEMEYER. Okay. So what you're saying is if the lender had the ability to have a higher rate of guarantee or could receive a higher rate of guarantee he would more inclined to lend. Is that what you're saying?

Mr. HOWE. That would help. However, I think it's the fact, the notion, of having to bear risk for projects for which there's not a technology track record. That itself is problematic. This is why our community has been saying that for the first projects of a kind the highest possible fraction of guaranteed loan is essential.

We're only talking a handful of projects here so that we can establish that track record and then get off to the races. Private lenders have financed tremendous expansion of proven technologies like independent power, wind power, solar installations. But we have to get that fire started. We've got to do the first few projects. I think

it's a good public investment for the government to get behind these first projects.

Mr. LUETKEMEYER. Okay. Which first projects are you referring to? Are you referring to cellulosic or are you referring to some other technology?

Mr. HOWE. This program is for biorefineries, advanced fuel biorefineries. So I think we are talking certainly about cellulosic, ethanol and other technologies that qualify under the RFS, in other words, that achieve significantly higher carbon reductions. So that's certainly our interest in it.

Mr. LUETKEMEYER. Very good. Thank you, sir.

Thank you, Madam Chairwoman. I'm give you back my time.

Chairwoman VELÁZQUEZ. Mr. Griffith.

Mr. GRIFFITH. Thank you, Madam Chair. I am taken number one by the technology and the information and the expertise of the panel and thank you for being here.

As a business man, there's something wrong here when we are not attracting private capital. Cargill, the largest privately owned company in the world should be a source of capital. Exxon should be a source of capital. Microsoft and many, many others and hedge funds and venture capital funds that look for opportunities that they see with great potential in the future and would love to invest in. Why do you think they are reluctant to invest in this area of energy production?

Mr. HOWE. I believe we are confronting a problem of public good. This is a classic public good problem that warrants government intervention. If we look at the benefit that the ethanol program has created for the country here was an excellent analysis done by Merrill Lynch about eight or nine months ago showing that the mere presence of the nine or ten billion gallons of ethanol in the nation's fuel mix helped to keep fuel prices, gasoline prices, about 15 percent lower than they would otherwise have been last year when we had that shocking episode of nearly $150 oil. What DOE has found is the American consumers saved $20 to $40 billion which I think is a tremendous payback on the $5 billion or whatever that was paid to the oil companies as subsidy for using ethanol.

This is one of these instances. It's a tragedy of the commons problem where the benefit cannot be captured by the private investor. There is a critical need for the government to participate to facilitate these new technologies.

Mr. GRIFFITH. If the CAFE standards were raised to 47 to 50 miles per gallon per average for a manufacturer, would you have a viable industry?

Mr. HOWE. I think we need to do everything we can looking out into the future. This is not either or. This is a both and situation. We need to conserve. We need to become efficient. We need to electrify. We need to do everything, you know, reconfigure our communities. But at the end of the day there will be a significant residual demand for liquid fuel that today is provided by petroleum that in the future needs to be provided by cleaner fuels as our petroleum supplies play out and as we come to grips with the necessity to reduce carbon emissions.

Mr. GRIFFITH. And if we have a two year drought that reduces the baseline product, what would we be looking at as far as our in-

dustry is concerned if we became dependent for 20 percent of our fuel on biofuel or biodiesel?

Mr. LITTERER. You know, we haven't had a major drought in this country since-

Mr. GRIFFITH. Last year.

Mr. LITTERER. No, we really haven't. If you go back in history, we have not really had a major drought affecting crop production. We've had isolated regional droughts. But we have not had a major drought that has impacted production. We had problems a couple years ago but we have still produced in the last two years 13 billion and 12 billion respectively, the two highest corn production years in history and, sure, there are going to be some ups and downs.

But to say we're going to have two years back to back major drought, if you look back historically, that just has not happened.

Mr. GRIFFITH. I see.

Mr. LITTERER. It hasn't.

Mr. GRIFFITH. I guess my question to you is what are the objections of private capital investing in this. I see such great potential for it and I'm sure there are people a lot smarter than I am that you're pitching this to in the private markets and they're not coming forward.

Mr. FERACI. If you-there are a variety of things right now. I'm speaking from biodiesel perspective. There are a variety of things right now that are causing harm to the industry and making it difficult to attract that capital. The one thing that we-some of that we can control. Some of that we can't. I mean the one that would be helpful is that you have to have this stable policy framework that is reliable, that sends a signal that biofuels are not just a flash in the pan, that it's something that's going to be there for a while to draw this sort of investment in the terminal infrastructure and things like that that you really need to get infrastructure.

Mr. GRIFFITH. That makes perfect sense. Thank you all.

Chairwoman VELÁZQUEZ. Time has expired.

Mr. Schock.

Mr. SCHOCK. Thank you, Madam Chairwoman. First, let me say I agree with the comments that have just been made and that is that we have to provide some level of consistency to the biofuel markets so that investors will want to continue to invest. Lenders, banks, financial institutions, venture capital firms will feel safe about making an investment in these plants and we as policymakers I think need to do what we can to shore up the market so that there is some consistency for those that are doing what it is we've asked them to do which is provide an alternative fuel for our country.

Specifically, I'm concerned with our ethanol industry right now as they have taken a hit and I think it's extremely important not only for that industry but every other industry thereafter whether it be cellulosic or others that we hope to have that industry be successful not only for the jobs that they've created but also for the psychological benefit that it has as we mentioned with the investors and entrepreneurs wanting to invest in the next greatest, latest invention, if you will, when it comes to biofuels.

With that said, I'm pleased that in my area, a group called Biofuels Manufacturers of Illinois, BMI, is in the process of starting

a biodiesel plant right in my district. Currently, they've obtained all the necessary permitting, the land rights and are ready to build the plant. They actually have contracted already with an enduser for their products. So it's not pie in the sky, trust us if we build it, if we produce it, someone will buy it. But actually the Farmer Cooperative GrowMart has agreed to buy their biofuel once it is produced.

I'm equally pleased that unlike some of the others that have come and gone in terms of the new biofuels they have partnered with the USDA lab in Peoria. Peoria, Illinois is home to one of four USDA Agricultural Utilization Centers and the researchers there have discovered a new crop which is currently termed a weed, pennycress, which has 36 percent oil in it, nearly twice as much of soybean, which is very exciting. Equally exciting I think is the fact that it's a winter crop which means it can be grown right now when the land is dormant and not being used, thus adding a second shift if you will to crop production into the agriculture industry.

With all that being, they've had their hurdles if you will in getting that plant online and getting this idea to be not just an idea or a dream but actual reality and I'm just interested in hearing from Mr. Feraci what your organization specifically with biodiesels can do for a group of entrepreneurs and individuals who have gone a long way in terms of the work and the investment to help make that a reality.

Mr. FERACI. Congressman, I know you've expressed a lot of interest in that project and we applaud your leadership on that. The National Biodiesel Board, we're a feedstock-neutral organization and the sort of research that you're talking about where they're looking at pennycrest as a potential oil seed crop is something that we're excited about. We encourage that going on.

And as you look at the industry has it has grown to commercial scale, with each passing year, you're seeing increased diversity in the feedstock that we're using to produce fuel. Yes, soybean oil is still a very important feedstock to us, but you're seeing more restaurant grease and animal fat and now you're seeing things like camelina and pennycrest that are coming on list as viable feedstocks that you can use to produce a spec biodiesel that will be accepted in the marketplace. So we're extremely excited about that.

Our organization with some of the things that you're, among some of the these that these enterprising individuals are probably going to run into is eventually at some point they're going to run into an issue with crop insurance and our organization does outreach with that to help them so that they get covered underneath that program.

There is also going to be a grower outreach component to it as well because like you said they're rotating and I believe those will be acres competing with winter wheat. So again we do grower outreach. We talk about the benefits of it and there is clearly going to be a demand for this feedstock out there if the price is competitive and going forward we would be more than happy to work with you to make this project a success.

Mr. SCHOCK. Great. Thank you. What kind of help do you provide in helping? I know the other issue, of course, is our loan guarantees.

Mr. FERACI. Right. In terms of just pointing them, we'd be more than happy to visit with them, see exactly what they're doing, what their needs are and see if we can't point them in the right direction in terms of programs they should be applying for.

Mr. SCHOCK. Okay. Great. Thank you.

Chairwoman VELÁZQUEZ. Ms. Halvorson.

Ms. HALVORSON. Thank you, Madam Chairman, and thank you, panel.

It's great to see you and this is an issue that's near and dear to my heart. First of all, let me tell you I drive a flexfuel vehicle. I buy E85 everywhere I go because I believe if each and every one of us takes responsibility for ourselves and talk about it that's a big help because we need to buy American wherever we go and we should be doing this not only when gas is $4 a gallon, but even when it's lower.

I just want to tell a story. I'm sure that everybody has a story to tell and you hear many of them. But I have a company in my district called Nova Biosource Fuels. It's in Seneca, Illinois and it's a renewable fuels business that's having financial trouble due to the economic crisis that we're in and it's probably no different than anybody else and it's a producer of biodiesel. It buys leftover grease from the fast food restaurants and turns that waste product into useable energy.

Now I toured it a couple of weeks ago and now last Thursday they have announced that they will be ceasing production because they're unable to identify a lender to give them credit while they're waiting for money to come in. They need to buy their feedstock so that they can turn it around. They have the capacity to annually produce 230 million gallons of biodiesel which is equal to 55 million fewer barrels of crude oil if only they had the funds to be available to them. When oil is valued at $40 a barrel, it means over $2 trillion of U.S. wealth transfers out of this country.

Now this is probably no different than anybody else and I've heard for the last hour and a half some of the different challenges and what's going on. We've heard about loan guarantees. We've heard about different challenges. They need $20 million. Now that's not something that's easily gotten and they've talked to several creditors.

Now as a panel and whoever wants to answer this, if there was one thing you as a group would ask Congress, how would you ask Congress right now to help with this credit crisis because that is the problem? Simple, one thing and I shouldn't use the word "simple." Nothing is simple when it comes to Congress, but everybody's having trouble getting credit and it's a vicious cycle and this is our problem. If they can get credit, they could keep their employees or their people employed and go out and get their product. What would you say to Congress on what you would need to get help for to keep these businesses going?

Mr. FERACI. I'll take a stab at it.

Ms. HALVORSON. Thank you, Mr. Feraci.

Mr. FERACI. You know, Nova Biosources are one of our members. They produce a quality fuel. They're a great company. I mean you've really put a face on what is a larger issue in our overall industry right. I know I'm sounding like a broken record here, but I would go back to you're talking about drawing in capital and having people have faith that there's going to be a long-term commitment to displacing petroleum with domestic renewable fuels.

So I would give you two answers and you've heard me say them previously. You have to have a long-term extension of the tax incentive and you have to have a workable RFS 2 that's going to create a domestic market for these fuels. That sends a signal to creditors and investors that these industries are going to be around, these companies are going to be around, and there's going to be a marketplace for them to meet a demand in. I think that would go further than anything in terms of keeping companies like Nova Biosource around and we should.

Ms. HALVORSON. And how soon could we do that? I mean how quickly then could we help them stay in business, turn things around, so that they could do what they do best and that we could send the message and educate people out there that we're going to do everything we can here in Congress to help them because what we've done in the stimulus package is to help those who haven't gotten to this point. You know they're already up and running. They don't need that feed money or that seed money to get started.

Mr. FERACI. If you look at the stimulus bill and there are some parallels to be drawn from it the idea of doing multi-year extensions on Section 45 on the renewable energy electricity production side is going to have the effect that you're talking about. The idea was that you're going to draw that capital in. The sooner that you can move on a longer term extension of biodiesel the better off we're going to be. The same thing on the renewable fuel side.

I mean Congress has acted. The program was supposed to be up and running on January 1 of this year. The sooner that's implemented in a workable fashion the better off that they're going to be.

Ms. HALVORSON. Great. Thank you so much.

Chairwoman VELÁZQUEZ. Time expired.

Ms. HALVORSON. I guess we have to go vote. Thank you so much.

Chairwoman VELÁZQUEZ. Mr. Schrader.

Mr. SCHRADER. Thank you, Madam Chair. We're competing with votes I guess here pretty shortly. I come from Oregon and very interested in the woody biomass. We're experimenting with other alternative, canola and other more convenient, if you will, alternatives to corn and biofuels. But I'm interested in the woody biomass, in particular, in the advance. So while a lot of the questions I know some of the answers will be similar. But how in particular can we help or what are the first steps for making woody biomass? And by that I mean particularly the forest woody mass. Over 50 percent of my state is Federal forest and I would like to use that to advantage.

Mr. HOWE. If I may take a crack at that, Mr. Schrader.

With the stroke of the pen, Congress could alter the definition of eligible woody biomass which as you'll recall in the Energy Independence and Security Act something like 24 percent of the avail-

able biomass was ruled ineligible for conversion to cellulosic biofuel and I think we have come to recognize that that needs to be changed in order to open up the kinds of feedstocks that you're talking about.

We see tremendous potential for the conversion of woody biomass, the pulp and paper mills, residues. We can make our remaining paper industry and lumber industry more viable enabling them to produce co-products. So I would say that is probably the most important thing you could do. I think the technology would come along to meet that need fairly quickly.

Mr. SCHRADER. Very good. Brazil has been very successful in promoting ethanol and biodiesel production. What have they done that's so different? Why is their circumstance, I'm not talking about the current economic crisis we're facing, but what's been their approach and why have they gone that route and we have not?

Mr. LITTERER. Well, I think they, of course, got started much sooner than we have. They've also made their automobiles so they can all use ethanol. I mean they've made that decision a long time ago. They can burn all levels of ethanol. They have capability with their automotive fleet and that's probably the biggest difference.

Mr. SCHRADER. I go a different route than some of the other members here. I also have some small independent gasoline dealers in my district and there's a lot of concern and there was a point at which they had trouble getting ethanol this past winter. Some of the larger brand name oil companies are frankly hoarding it to make sure that their stations had opportunity.

So how do I juxtapose that against the discussion there's plenty of ethanol out there in this crisis and stuff? How do we make sure the independents are guaranteed access to ethanol at five, ten, fifteen, pick a number, blend?

Mr. HOWE. Over time, we need to develop the infrastructure. We need to disabuse ourselves of the falsehood that ethanol can't be moved by pipeline. It can. It is. It's just that we're not doing it yet. In fact, it has started in Florida, pipeline infrastructure development. We need to maintain a good rail network obviously. But I think what we're talking about is not a shortage of production capacity. It really is distribution bottlenecks that have created those problems.

Mr. SCHRADER. Okay. That's probably the area. The last quick question and I don't know if you can answer it. What's the price point for oil or barrel of oil or gallon of gas where it becomes optimum for investment in biofuel/biodiesel technology?

Mr. LITTERER. I'm not sure there's one price point that you can point to because you have crude oil, you have corn price, you have all these input that go into it. So I don't know that you could come up with one price.

Mr. SCHRADER. What's the range? I guess I'll refine.

Mr. LITTERER. Body, I don't know. I think if we were at today's corn price probably and a $60 to $70 oil, we probably could be pretty competitive. But I really hesitate to throw too many numbers around here because it's a moving target.

Mr. HOWE. I think one important idea to throw in here is the long-term replacement cost for oil is probably in the range of $70. When prices went below $70, we saw oil companies, state-owned oil

companies, and private developers worldwide start to pull back on development. So we are no longer replacing the oil that we are using up.

Remember last year when oil was $80-$100 and rising and there was polling of American consumers. Would you be willing to live with an oil price that doesn't go below $70 if that provides the assurance for a renewable fuels industry to take root and develop, a lot of the Americans at that time would have been very happy to say, "I'll sign up for $70 if I know that's my hedge." Now that oil went down to $36 to $40, where is that commitment? That's what we need.

Mr. SCHRADER. Thank you.

Chairwoman VELÁZQUEZ. Ms. Dahlkemper.

Ms. DAHLKEMPER. Thank you, Madam Chairwoman. I thank you for bringing forward to us this timely and critical meeting. I think there are few of us who are not concerned about our dependence on foreign oil and know the implications certainly on our domestic economy and our foreign policy.

In my district, we have Lake Erie Biofuels and, Mr. Feraci, I guess I wanted to address you on a couple questions here, having sat down and talked to them a number of times about what's going on in that industry and Pennsylvania, I'm from Pennsylvania, and I think we're the fourth state I believe now that is going to be working towards a two percent blend. Is that correct? Four states?

Mr. FERACI. Yes, you're definitely towards the front end.

Ms. DAHLKEMPER. Yes. So obviously we're a long way. We have 46 other states out there.

But I guess my question is, first of all, I wanted to ask how many plants have closed recently because my understanding is there's a number of biodiesel that have closed or are very close to closing at this point.

Mr. FERACI. Right. As well as we can-I mean the last survey of our members that we did there is 176 plants out there right now. Again, doing these surveys, we estimate that about one-third, maybe even less, are actually operating and producing fuel right now.

Ms. DAHLKEMPER. The others were all producing fuel at some point.

Mr. FERACI. At some point, yes. It's still in the ground. They're operating biodiesel plants. They're just not running right now.

Ms. DAHLKEMPER. And these are all over the country.

Mr. FERACI. These are all over the country, yes.

Ms. DAHLKEMPER. Okay. So my question is I guess because Lake Erie Biofuels, 80 percent of their production goes to Europe. Right now, they're in just kind of temporary issue with Europe stockpiling thinking they were going to go to a ten percent blend I believe, but they're still at 5.75 because of the economy. But they would like to sell domestically.

Is the issue more of a blend requirement issue, you know, having a customer base here within our country or a capital issue in terms of why two-thirds of these plants have closed down?

Mr. FERACI. We kind of tern it a "perfect storm" of a confluence of events that have come together that are all to the detriment of the industry, be it you have an unfavorable feedstock pricing

versus the price of petroleum. You mentioned Europe. That's the world's premium diesel market that the Europeans are taking protection steps in our opinion to close that market down.

But long term what we want to do and what we think is important and what was envisioned in the RFS2 is to create a domestic marketplace and a domestic draw to get fuel used in here in the U.S. so that Lake Erie Biofuel can sell their fuel here and that's what the RFS2 is all about.

We're behind schedule on implementation of that. It has to be implemented in a workable way so that they're going to have a demand, a built-in demand, in this marketplace to replace petroleum diesel fuel with their product.

Ms. DAHLKEMPER. So I guess that goes back to Mr. Griffith's question regarding investment and this all needs to come together to make this happen.

Mr. FERACI. Absolutely and the one, a stable policy framework, something that's reliable that the private sector knows is going to be there for the long term is what you need to draw in this investment capital and provide the certainty that these guys need. If you look around the world where they've had successful implementation of renewables policy, Europe, we talked about Brazil. The one commonality is that they made a commitment and it was a long-term commitment and it was reliable and people knew that it was going to be there and we need to have the same thing here.

Ms. DAHLKEMPER. Okay. Thank you very much. Appreciate it. I yield back my time, Madam Chair.

Chairwoman VELÁZQUEZ. Thank you. Let me just thank all the witnesses for your incredible contribution in the discussion of this important issue and, Mr. Feraci, regarding EPA and RFS2, I'm going to be looking into that issue and we're going to see as a committee what can we do to make sure that it is done and it is done properly without jeopardizing any of the industries.

With that, I ask unanimous consent that Members will have five days to submit a statement on supporting materials without objections. So ordered.

This hearing is now adjourned. Thank you. Off the record.

[Whereupon the Committee adjourned.]

NYDIA M. VELAZQUEZ, NEW YORK
CHAIRWOMAN

SAM GRAVES, MISSOURI
RANKING MEMBER

Congress of the United States
U.S. House of Representatives
Committee on Small Business

2361 Rayburn House Office Building
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STATEMENT
Of the Honorable Nydia M. Velázquez, Chairwoman
United States House of Representatives, Committee on Small Business
Full Committee Hearing: *"The State of the Renewable Fuels Industry in a Struggling Economy"*
March 4, 2009

In his joint address to Congress last week, President Obama made it clear that there can be no economic recovery without energy independence. Entrepreneurs are already leading that charge. Small biofuels producers are not only addressing climate change, but are helping to end our reliance on foreign oil. Just as importantly, they are creating new jobs and ushering in a stronger, greener economy.

The U.S is now home to 176 biodiesel plants, up from just 9 in 2001. Ethanol facilities are also on the rise. Thirty-one new plants opened in the last year, with facilities spanning 26 states across the country. These businesses are generating jobs for thousands of Americans and breathing new life into rural economies. On top of that, they are making serious strides in developing cleaner, sustainable oil alternatives—last year, production for biodiesel alone reached 690 million gallons.

But despite their recent progress and enormous potential, many of these businesses are now struggling to survive. With the price of oil relatively low, the country has been lulled into a false state of complacency. The call for renewable fuels—which once rang loud and clear—has since died down. Meanwhile, the growing recession has also taken its toll. For biofuels entrepreneurs, the effects have been nothing short of devastating.

Perhaps the greatest problem plaguing the renewable fuels industry is the diminished focus on energy prices. With oil hovering around $40 a barrel, demand for renewable fuels has fallen off considerably. Profits are down and, to make matters worse, so are investments. Most of us know it is only a matter of time before gas prices go up again. Unfortunately, many venture capitalists now view renewable energy as a long-term investment--one that few are willing to make in this uncertain economy.

For the biofuels industry, dwindling investor interest has been compounded by the recession. Credit is drying up, and banks aren't making loans. Even lending through the USDA's Farms Service Agency—traditionally a lender of last resort—has been

jeopardized. Applications for FSA lending have shot up 200 percent since last year. The agency is now worried about meeting demand in the coming fiscal year.

The results of these drop-offs will be dire. Already, new construction for ethanol plants has slowed dramatically. At the same time, more than 25 facilities have closed nationwide, idling almost 2 billion gallons of fuel capacity. Businesses that have managed to survive are straining to meet even basic obligations like feedstock expenses.

Many biodiesel and ethanol providers committed to these contracts when grain and vegetable costs were at a premium. Though prices have plummeted, businesses are still locked in at record rates.

Two weeks ago, President Obama signed the American Recovery and Reinvestment Act into law. That bill includes more than $70 billion in energy measures. But while provisions within the stimulus will encourage greater use of renewable fuels, they will not address every challenge. That is why we are here today—to discuss viable fixes to the problem. Already, a number of potential solutions have been raised, from increasing the blend wall for ethanol to extending targeted tax incentives. In this afternoon's hearing, we will examine a few of those suggestions.

When oil hit $147 a barrel last summer, biofuels looked like the best way out of a full blown energy crisis. Today, they are the best way out of a *dormant* energy crisis. These businesses are not only creating new jobs, but they are working to ensure we are not caught in the crosshairs when gas prices go up again. That's more than energy independence—that's economic independence, and that's the new energy plan this country needs.

Opening Statement
Ranking Member Sam Graves
House Committee on Small Business
Hearing:
March 4, 2009

Good Afternoon. Thank you, Madam Chair, for holding this hearing on the state of the renewable fuels industry. I also would like to thank each of the witnesses for being here today. I understand you all have very busy schedules and appreciate your attendance.

Energy is the life blood of our economy. U.S. economic prosperity is closely tied to the availability of reliable and affordable supplies of energy. This is not a new issue. However, with technology improving exponentially, the energy independence discussion has changed greatly over the past few years.

The stark reality is that we import about 60% of the petroleum we currently need. To make our petroleum problem worse, we have not built a new refinery in the United States in over 30 years. It is stretching our refining capacity to the limit and affecting the volatility of energy prices.

Efforts to open up the Arctic National Wildlife Refuge and the Outer Continental Shelf to oil and natural gas exploration should and must continue, but we can not ignore the fact that we need renewable fuels to help take the strain off of our need for imported fossil fuel energy.

It is not just the United States that is going to need more energy in the coming years. Our traditional energy supplies will be increasingly strained by dramatic growth in global demand. We need to focus on both short-term and long-term goals. Most certainly, investing in renewable fuels technology is a positive step toward

energy independence. We must be forward thinking in our approach to meet our current needs and future requirements. These sources of energy could hold the key to energy independence in the future.

Over the past few years of substantial growth in the renewable fuels industry, many policymakers who might have had legitimate concerns about the industry are beginning to see the value and positive outcomes that can be associated with renewable fuel sources. These positive results are found most immediately in rural America where the difficulty in attracting jobs, investment, and maintaining the infrastructure can be more complex.

This hearing presents an excellent opportunity to learn more about the renewable fuels industry. Many of these producers are classified as small businesses by the Small Business Administration. Not unlike other industries, biofuels producers are facing difficult economic times with little available capital necessary for expansion and job creation. This is especially critical for small producers who do not have the available equity to leverage loans. The volatile economic conditions are also having a negative effect on this industry and today we hope to detail what, specifically, are the biggest impediments to growth, and offer policy options that could help the industry continue to grow.

Again, I thank you Madam Chair for holding this hearing and I yield back.

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Small Business Committee
United States House of Representatives

Hearing on
The State of the Renewable Fuels Industry in the Current Economy

Testimony of

Nathan Kimpel
President & COO, New Energy Corp.

March 4, 2009

Good morning Chairwoman Velazquez, Ranking Member Graves and Members of the Committee. My name is Nathan Kimpel and I am president and chief operating officer of New Energy Corp. New Energy is located in South Bend, Indiana and became operational in 1984. We were the first large-scale, greenfield ethanol plant built in the United States. We have been in continuous operation and are in line to produce our 2 billionth gallon of ethanol this year. In 2008, New Energy purchased over $180 million of corn from local farmers, farmer owned cooperative elevators and commercial grain companies.

This is an important and timely hearing, and I am pleased to be here to discuss the unique challenges and economic difficulty currently facing New Energy Corp. and the U.S. renewable fuels industry.

Background

Today's renewable fuels industry consists of 170 biorefineries located in 26 different states with the capacity to produce 13 billion gallons of high octane, clean burning motor fuel that can be used right now. An additional 20 biorefineries are under construction. In 2008, the U.S. renewable fuels industry's operating capacity increased by 2.7 billion gallons, a 34 percent increase over 2007. This growth in production capacity was fueled by the completion, start-up, and operation of 31 new ethanol plants that will ensure that the industry is capable of filling the Federal requirements for ethanol use outlined in the Renewable Fuels Standard (RFS). The U.S. renewable fuels industry 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 70 percent of the nation's fuel, and is sold virtually from coast to coast and border to border. Last year, the U.S. renewable fuels industry produced and sold a record 9 billion gallons, contributing significantly to the nation's economic, environmental and energy security.

The U.S. ethanol industry continues to have a positive impact on our nation's economy. U.S. ethanol producers have long been on the cutting edge of the green economy. According to a report completed just last week for the Renewable Fuels Association[1], spending by the U.S. ethanol industry in 2008:

- Contributed $65.6 billion to the nation's Gross Domestic Product (GDP);
- Supported more than 494,000 jobs in all sectors of the economy; and,
- Generated an estimated $11.9 billion in tax revenue for the federal government and nearly $9 billion of additional tax revenue for state and local governments.

Further, the report notes that the net benefit to the Federal government, after ethanol related tax credits, was more than $7 billion in 2008, providing a return on every dollar invested of 2.5 to 1.

Under the RFS in 2022, 35 of the 36 billion gallons of renewable fuels will be ethanol. Producing 35 billion gallons of ethanol will, according to the report:

- Add nearly $1.23 trillion (2000$) to real GDP by 2022;
- Support as many as 1.18 million jobs in all sectors of the economy;
- Displace the equivalent of nearly 11 billion barrels of crude oil between 2009 and 2022; and,
- Increase federal tax revenues by nearly $223 billion (2000$) between 2009 and 2022 while state and local tax revenues will increase $167.2 billion (2000$).

Current Economic Climate

The renewable fuels industry has taken significant steps forward in reaching the vision of 36 billion gallons of renewable fuel usage by 2022. From 6.5 billion gallons produced in 2007, the U.S. renewable fuels industry has invested more than $10 billion to expand to 12.5 billion gallons of production capacity to reach the RFS of 12 billion gallons by 2010. The economic crisis is significantly impacting sustained, continued growth and development of the industry. Recently, the U.S. renewable fuels industry has been devastated by the scarcity of both short-term credit to finance ongoing operations and long-term capital to finance expansion and new construction.

The renewable fuels industry along with all of our small business supplier partners, the American corn farmer, has fallen victim to many of the same problems that have affected other industries, including high raw material costs, and collapsing oil and gasoline prices. Ethanol prices are partly driven by gasoline prices which are in turn driven by crude oil. Many input costs for producing corn are as well driven by crude oil prices. Both gasoline and crude oil reached record

[1] *Contribution of the Ethanol Industry to the Economy of the United States*, Dr. John Urbanchuk, Director, LECG, LLC, February 23, 2009.

levels in 2008. Crude oil prices skyrocketed to $147 per barrel before sinking to below $40. According to the Energy Information Administration, gasoline use fell an estimated 3.3 percent in 2008 – the sharpest decline since 1992 -- as prices hit record levels. Oil led the 2008 commodity boom, and corn prices followed. Oil prices have fallen due in large part to weak demand from a slowing world economy. Falling gasoline prices have pulled ethanol down as well, putting pressure on revenue.

However, gasoline and ethanol prices have fallen much more than corn prices over the last year. We look at a concept called the Commodity Price Spread. This is essentially the difference between the Daily Market Replacement Prices of ethanol and corn expressed on a $ per gallon basis. In January 2008, the Commodity Price Spread was enough to cover all production and debt service costs plus make a reasonable contribution on investment. By July, the Commodity Price Spread had narrowed to the point where an average or model plant was covering perhaps all Variable Costs and making a contribution to Semi-Variable, but likely not covering the Fixed Costs of Operations much less any Debt Service. Since July, the Commodity Price Spread has vacillated between not even covering Variable Costs to making a contribution to Fixed Costs but rarely if ever making any contribution to Debt Service. Our projections for the balance of the year based solely on the Futures Markets for corn and ethanol show little to no improvement.

Corn input costs are established as much as a year before cash sales take place. Our suppliers tell us that at today's market prices they are well below their production costs. Unless agriculture production costs drop substantially this year, the price squeeze between corn and ethanol may well continue into next crop year. The RFS for 2009, which effectively is 9.5 billion gallons after imports and prior year carry over credits, is now not only the floor but also the ceiling for demand.

Today, more than 25 ethanol plants have closed nationwide, idling nearly 2 billion gallons of capacity.

The outlook for New Energy Corp. and the U.S. ethanol industry will depend on several factors, including economic growth (consumer spending and gasoline demand), credit availability, and oil and gasoline (and ethanol) prices. We need to assure the continued viability of the industry as it stands today, as well as provide for future evolution and innovation while stimulating thousands of green jobs. To do this, access to immediate necessary operating capital is critically important to help weather the current economic conditions facing the industry.

U.S. ethanol producers have answered the challenge put forth in the RFS and are producing enough ethanol to fill the requirements. In doing so, the industry has recognized new opportunities to expand the use of ethanol and ensure the continued success of the RFS. The market for ethanol and other biofuels must expand to ensure that America's ethanol industry continues to grow and evolve. It is critical that the Federal government revisit the arbitrary limit on ethanol blending – today capped at 10 percent of each gallon of gasoline – and allow gasoline blenders and refiners to take full advantage of the benefits of ethanol blending. Increasing ethanol content in gasoline will ensure a market will exist for the next generation of ethanol produced from cellulose and other biomass materials like municipal solid waste. We look forward to continuing to work with Congress as well as with the U.S. Environmental Protection Agency, the U.S. Department of Energy and U.S. Department of Agriculture on this issue.

Conclusion

The Energy Independence and Security Act of 2007, the 2008 Farm Bill and several other policies enacted by the 110th Congress clearly put our nation on a new path toward greater energy diversity and national security. By continuing the strong foundation the U.S. renewable fuels industry has built for new, green American jobs, we can begin the hard work necessary to mitigate the impact of global climate change, reduce our dependence on foreign oil, and provide a tremendous economic stimulus to small business across rural America. The challenges faced by our industry today will make it stronger and more successful in the future.

Thank you.

Statement of Mr. John B. Howe
Vice President, Public Affairs, Verenium Corporation
Before the Committee on Small Business
United States House of Representatives
March 4, 2009

Madame Chairman and members of the Committee, good afternoon. My name is John B. Howe, Vice President, Public Affairs for Verenium Corporation. We are a leading developer of advanced biofuels process technology and commercial projects, headquartered in Cambridge, Massachusetts. I greatly appreciate the opportunity to speak with you in this hearing on challenges facing the renewable fuels industry. This is a truly critical topic and a most critical time for this discussion.

Among America's biggest challenges is the need to expand domestic energy resources and curb our appetite for imported fuels. Over the past few years, we have all seen how our dependence on foreign supplies has drastically weakened our nation's economy. And we must recognize that, just as US oil production peaked forty years ago, we are year by year moving toward a global peak or plateau in conventional oil production. Finally, we are coming to grips with the need for dramatic action to curb carbon emissions and forestall climate change. Advanced biofuels, which are low-carbon, renewable and domestically available, can help us to address all of these major challenges. In recent years they have become not simply a nice-to-have option, but truly a must-have solution. The temporary, drastic fall in world oil prices brought on by the economic downturn does not alter our longer-term predicament. Major changes to our capital-intensive liquid fuels infrastructure will take years to implement. If we expect advanced biofuels to be a scalable, truly impactful part of the energy solution within the next decade, there is literally no time to lose.

The Small Business Committee has a special stake in this issue because a domestic US advanced biofuels industry will be a major driver for growing small businesses nationwide. Such an industry will rely on small-scale, geographically dispersed production. It will use a variety of agricultural feedstocks and innovative, regionally-adapted technological processes. It will generate a wealth of high-quality, non-exportable jobs in small businesses throughout the nation. This is shown clearly by a map appended to my statement with the locations of currently active advanced biofuels projects nationwide.

The good news is that the emerging advanced biofuels industry is making strong technical progress, belying the cynic's barb that advanced biofuels are "always a decade away." Last month, Verenium successfully commissioned one of the nation's first true demonstration-scale cellulose-to-ethanol plants, a privately-financed, $80 million, 1.4 million gallon facility in Jennings, LA that generated 300 construction jobs and has 70 permanent employees. In January, we announced our plans to participate in a 36 million gallon commercial-scale facility, to be built in south central Florida, that will generate 400 construction jobs, 140 permanent jobs and a host of spinoff jobs in the local community. The expanded RFS targets established by Congress in 2007 may appear ambitious. But our nation can reach these targets if we stand by this commitment, and work together to develop a strong, clear, comprehensive and consistent policy framework that supports it. Given the effects we saw last year from skyrocketing costs for energy imports, I believe it could be much costlier in the long run not to stand by this commitment. Truly, this is a case where destiny is in our own hands.

There are, however, several obstacles to the successful development of a domestic advanced biofuels industry. Most crucial are financing challenges even more severe than those in the economy at large. At present, large, well-established companies selling standard products are facing tight credit. But even in the best of times, private lenders are unwilling to take technology risk on energy projects using new technologies. So finding private capital to commercialize new biofuels technology is virtually impossible

under present conditions. The result is a financing logjam. The nation will need first-of-a-kind, commercial-scale projects. This is the only way to establish a track record for new technologies. Once these first steps are taken, private capital will be able to step and fund the buildout of the industry. To take this first step and break this logjam, there is essentially no other place to go today except for government loans, grants and loan guarantees.

These financing challenges, and the challenges inherent in developing new technologies, are only part of the story. Advanced biofuels developers are also hard at work with partners in the agricultural sector, establishing new and fairly complex supply chains for the planting, production, harvest and collection of new feedstocks. Downstream in offtake markets are other risks. Policymakers have yet to clarify how the rapidly expanded production of biofuels mandated by the RFS will be absorbed in a market in which EPA regulations act as a quota, limiting the blending of ethanol in gasoline to 10%. Finally, the global fuels market itself is famously subject to the influence of strategic behavior by large and powerful actors. Several statements from the leadership of the OPEC cartel in recent years suggest a goal to prevent biofuels from becoming established as an alternative fuel source. We have our work cut out for us!

Despite all of these obstacles, the important thing to remember is that the advanced biofuels industry holds tremendous long-term potential for our nation – to help renew our economy, to create jobs, to restore natural balance in our fragile environment, and to enhance domestic energy security. A recent report prepared for GM by Sandia National Laboratory supports this perspective. Sandia found that a large-scale cellulosic ethanol industry, capable of meeting one-third to one-half of America's liquid fuel needs from within a comparatively modest physical footprint, is both feasible and affordable. Appended to my statement is a summary and list of recommendations from this report. The key to success, Sandia found, is a sustained, consistent policy commitment. A half-hearted approach will not do. We simply do not have the option <u>not</u> to pursue advanced biofuels. Instead, we need to focus on how to do it right, through careful attention to the right feedstocks and processes.

Let me close by observing that today's economic crisis arose from many complex forces. But there is strong evidence that the surge in world oil prices, combined with our excessive dependence on oil imports, was the precipitating event. We all want to know when the nation will emerge from today's economic weakness. Given the realities of the 21st century, if our nation is to achieve a truly sustainable, long-term recovery, we simply must have commercially viable, scalable and environmentally sustainable technologies for the domestic production of liquid fuels. Granted, the challenges we face in meeting this goal are severe. But failure is not an option.

This concludes my testimony. Thank you very much for the invitation to participate in today's hearing.

Existing and Planned U.S. Cellulosic Biofuel Biorefineries

Bio
BIOTECHNOLOGY INDUSTRY ORGANIZATION

90-Billion Gallon Biofuel Deployment Study

Executive Summary

Sandia National Laboratories and General Motors' R&D Center conducted a joint biofuels systems analysis project from March to November 2008. Known as the "*90-Billion Gallon Biofuel Deployment Study*," the purpose of the project was to assess the feasibility, implications, limitations, and enablers of large-scale production of biofuels in the United States.

Ninety billion gallons of ethanol (the energy equivalent of approximately 60 billion gallons of gasoline) per year by 2030 was chosen as the book-end target to understand the requirements of an aggressive biofuels deployment schedule. Since previous studies have addressed the biomass supply potential, but not the supply chain rollout needed to achieve large biofuels production targets, the focus of this study was to develop a comprehensive systems understanding of the evolution of the complete biofuels supply chain and key interdependencies over time.

The biofuels supply chain components examined in this study included direct agricultural land use changes, production of biomass feedstocks, storage and transportation of these feedstocks, construction of conversion plants, conversion of feedstocks to ethanol at these plants, transportation of ethanol and blending with gasoline, and distribution to retail outlets. To support this analysis, a 'Seed to Station' system dynamics model (Biofuels Deployment Model – BDM) was developed to explore the feasibility of meeting specified ethanol production targets. System dynamics was chosen as the primary modeling approach because it is well suited to dynamic, non-linear problems involving time-varying inputs and feedback – two central features of the biofuels enterprise.

Potential biofuels supply chain barriers examined in this study included impact on land availability and use; impact on water consumption; the transportation and distribution infrastructure challenges and bottlenecks; costs for feedstock, capital, and energy; the reluctance to make long-term investments due to risk; the pace of technological innovation; and the greenhouse gas footprint. Sensitivity analyses were conducted to determine key parameters affecting production volumes, cost, and greenhouse gas savings. The effectiveness and costs of selected policy options to mitigate potential barriers were also examined.

Study Conclusions

This study concludes that 90 billion gallons per year of biomass-derived ethanol can be produced and distributed with enduring government commitment and continued technological progress. Specifically, the model projects that 90 billion gallons of ethanol can be produced per year in the U.S.: 15 billion gallons per year from corn ethanol, with the balance from cellulosic ethanol.

In the study we also evaluated a scenario with 15 billion gallons of corn-derived ethanol and 21 billion gallons of cellulosic ethanol by 2022, an amount that meets the Energy Independence and Security Act advanced biofuels mandate. In this scenario, cellulosic ethanol continues to ramp up to 45 billion gallons per year by 2030, for a total ethanol production of 60 billion gallons per year. This scenario is the basis for the conclusions summarized below.

Producing 45 billion gallons per year cellulosic ethanol by 2030 requires 480 million tons of biomass, of which 215 million tons comes from dedicated energy crops. Allowing for storage, loss, and immature perennial crops, these energy crops utilize 48 million acres of planted cropland from what is now idle, pasture, or non-grazed forest. The simulations assume technological progress in the conversion technologies, which results in average biomass conversion yields of over 95 gallons of ethanol per dry ton of biomass by 2030.

Biofuels capital expenditures necessary to achieve 60 billion gallons per year of installed production capacity are on the order of $250 billion. Though large, these expenditures are actually of similar magnitude to petroleum-related investments required to establish and maintain 40 billion gallons per year of domestic oil production. However, large capital investments are challenging considering the present volatility of the oil and capital markets and the amount of regulatory risk.

This study demonstrates that cellulosic biofuels can compete with oil at $90/bbl based on the following assumptions:

1) Average conversion yield of 95 gallons per dry ton of biomass
2) Average conversion plant capital expenditure of $3.50 per installed gallon of nameplate capacity
3) Average farm-gate feedstock cost of $40 per dry ton

Sensitivity analyses varying these assumptions individually gave potential cost-competitiveness with oil priced at $70/bbl to $120/bbl.

The cost competitiveness of ethanol is directly dependent on the price of oil and the realization of technological improvements. In particular, ethanol 'seed-to-station' floor cost is approximately $1.50/gal-ethanol without taxes, and gasoline will undercut this if priced below $2.25/gal-gasoline without taxes (about $2.65 at the pump). Government policy incentives such as carbon taxes, excise tax credits, and loan guarantees for cellulosic biofuels have the ability to mitigate the risk of oil market volatility, thus reducing the risk and increasing the attractiveness of cellulosic biofuels investments. However, these policy incentives would have to protect cellulosic biofuels against low priced petroleum-based competitors for an extended period to attract significant capital investment.

Continued support of R&D and initial commercialization is also critical, because sustained technological progress and commercial validation are required to affordably produce the large volumes of ethanol considered in this study. Infrastructure investment is important to ensure that the rail network in the U.S. can support biofuels distribution; however, this is a small component of projected total rail demands resulting from future expanded economic activity.

Significant R&D effort is required for conversion plants to increase their yields to drive down the cost of biofuel production. Additionally, continued R&D efforts are required to achieve commercial cultivation of high-yield energy crops – key to producing significant volumes of sustainable biofuels without drawing upon land currently used for food and feed. Additionally, expanding feedstock production must target lands requiring little or no irrigation to keep water demands manageable.

Transportation CO_2 savings were 250 million tons CO_2 equivalent per year for 60 billion gallons of ethanol (excluding greenhouse gas emissions from land use change – a current topic of intense research). The energy in cellulosic ethanol is about 3.8 times the energy content of fossil fuels used for the entire supply chain (production and distribution; numbers based, in part, on assumptions in GREET). This is about 4 times the net energy ratio for gasoline (0.8).

Biofuels Commercialization Enablers

This study found no fundamental barriers to producing biofuels at large scale (e.g., supply chain or water constraints). However, multiple actions could be taken to enhance the successful build-out of the cellulosic biofuels industry.

Possible actions include:

- A multi-decade energy policy that values stable fuel prices that are high enough to enable energy diversity in light of oil price volatility and periodic economic dislocations
  - Options include greenhouse gas taxes and market incentives (e.g., $50/ton CO_2 tax significantly reduces required incentives)
- Supportive policies to enable biofuel market success, including well-planned market incentives and carbon pricing, that could minimize investment risks
- Enhancement of biofuels' competitiveness with aggressive R&D- and commercialization-associated funding, despite current declining/low oil prices (Department of Energy, VCs, etc.)
  - Conversion investments to increase conversion efficiency and decrease capital cost
  - Improved energy crop technology to reduce cost, land use, and water use
  - Decreased timeframe for technologies to reach maturity (lowers investment risk)

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Testimony of Manning Feraci
Vice President of Federal Affairs, National Biodiesel Board
Before the U.S. House Committee on Small Business
March 4, 2008

Summary of Testimony: Biodiesel is a commercially viable, low-carbon renewable fuel that is widely accepted in the marketplace. There are significant economic, environmental and energy security benefits associated with the domestic production and use of biodiesel. Though there has been a significant increase in U.S. biodiesel production since 2004, the U.S. biodiesel industry is today in the midst of an economic crisis that threatens the industry's viability and the nation's ability to meet the use requirements for advanced biofuels established by the Energy Independence and Security Act (EISA). A stable federal policy framework that provides a multi-year extension of the biodiesel tax incentive and a workable Renewable Fuels Standard will allow the U.S. biodiesel industry to remain viable and play a constructive role in the nation's overall energy strategy.

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Chairwoman Velazquez, Ranking Member Graves and Members of the Committee, I thank you for the opportunity to testify today on behalf of the National Biodiesel Board (NBB) about the current economic status of the U.S. biodiesel industry.

About NBB: NBB is the national trade association representing the biodiesel industry as the coordinating body for research and development in the United States. It was founded in 1992 by state soybean commodity groups who were funding biodiesel research and development programs. Since that time, the NBB has developed into a comprehensive industry association which coordinates and interacts with a broad range of cooperators including industry, government and academia. NBB's membership is comprised of biodiesel producers; state, national and international feedstock and feedstock processor organizations; fuel marketers and distributors; and technology providers.

Background and Industry Overview: Biodiesel is a diesel replacement fuel made from agricultural oils, fats and waste greases that meets a specific commercial fuel definition and specification. The fuel is produced by reacting feedstock with an alcohol to remove the glycerin and meet the D6751 fuel specifications set forth by the American Society for Testing and Materials (ASTM International). Biodiesel is one of the best-tested alternative fuels in the country and the only alternative fuel to meet all of the testing requirements of the 1990 amendments to the Clean Air Act.

Biodiesel is primarily marketed as a 5% blending component with conventional diesel fuel, but can be used in concentrations up to 20%. It is distributed utilizing the existing fuel distribution infrastructure with blending occurring both at fuel terminals and "below the rack" by fuel jobbers. Biodiesel is beginning to be distributed through the petroleum terminal system. To

date, biodiesel is available in over 40 fuel distribution terminals. In the past year, two major pipeline companies have successfully tested B5 blends in pipelines, and the biodiesel industry has committed funds to continue to study the technical needs required for moving biodiesel through U.S. pipelines. Already, biodiesel is moved through pipelines in Europe and extending that capability in the U.S. would significantly increase biodiesel penetration in the U.S. diesel fuel market.

Biodiesel Public Policy Benefits: There are compelling public policy benefits associated with the enhanced production and use of biodiesel in the U.S.

Biodiesel Reduces our Dependence on Foreign Oil: Biodiesel can play a major role in expanding domestic refining capacity and reducing our reliance on foreign oil. The 690 million gallons of biodiesel produced in the U.S. in 2008 displaced 38.1 million barrels of petroleum, and increased production and use of biodiesel will further displace foreign oil. In addition, biodiesel is an extremely efficient fuel that creates 3.2 units of energy for every unit of fuel that is required to produce the fuel.

Biodiesel is Good for the Environment: Biodiesel is an environmentally safe fuel, and is the most viable transportation fuel when measuring its carbon footprint, life cycle and energy balance. The U.S. Department of Agriculture (USDA)/Department of Energy (DoE) lifecycle study shows a 78% reduction in direct lifecycle CO2 emissions for B100. 1 billion gallons of biodiesel will reduce current life cycle greenhouse gas emissions by 16.12 billion pounds, the equivalent of removing 1.4 million passenger vehicles from U.S. roads. In 2008 alone, biodiesel's contribution to reducing greenhouse gas emissions was equal to removing 980,000 passenger vehicles from America's roadways.

Biodiesel's emissions significantly outperform petroleum-based diesel. Research conducted in the U.S. shows biodiesel emissions have decreased levels of all target polycyclic aromatic hydrocarbons (PAH) and nitrited PAH compounds, as compared to petroleum diesel exhaust. These compounds have been identified as potential cancer causing compounds.

Biodiesel is the only alternative fuel to voluntarily perform Environmental Protection Agency (EPA) Tier I and Tier II testing to quantify emission characteristics and health effects. That study found that B20 (20% biodiesel blended with 80% conventional diesel fuel) provided significant reductions in total hydrocarbons; carbon monoxide; and total particulate matter. Research also documents the fact that the ozone forming potential of the hydrocarbon emissions of pure biodiesel is nearly 50% less than that of petroleum fuel. Pure biodiesel typically does not contain sulfur and therefore reduces sulfur dioxide exhaust from diesel engines to virtually zero.

The Biodiesel Industry is Creating Green Jobs and Making a Positive Contribution to the Economy: In 2008 alone, the U.S. biodiesel industry supported 51,893 jobs in all sectors of the economy. This added $4.287 billion to the nation's Gross Domestic Product (GDP) and generated $866.2 million in tax revenue for federal, state and local governments.

By conservative estimates, there is domestic feedstock available to support 1.77 billion gallons of annual biodiesel production in the U.S. The domestic industry has the capacity to support this level of production. The production of 1.77 billion gallons of fuel would support 78,619 jobs; add $6.660 billion to the GDP; displace 97.8 million barrels of petroleum; generate $1.345 billion in revenue for federal, state and local governments; and reduce greenhouse gas emissions by 27.4 billion pounds - the equivalent of removing 2.38 million passenger vehicles from U.S. roads.

The Biodiesel Industry Stimulates Development of New Low-Carbon Feedstocks: The feedstock used to produce U.S. biodiesel has increasingly diversified, with waste products such as animal fat and used restaurant grease (yellow grease) making up a larger portion of the feedstock used to produce fuel. Biodiesel production is currently the most efficient way to convert lipids into low-carbon diesel replacement fuel, and as a result, industry demand for less expensive, reliable sources of fats and oils is stimulating promising public, private and non-profit sector research on second generation feedstocks such as algae.

Algae's potential as a source of low carbon fuel has been well documented, and a stable, growing biodiesel industry is necessary if the U.S. is to eventually benefit from the commercial scale production of algal-based biofuels. The NBB estimates that for every 100 million gallons of biodiesel that is produced from algae, 16,455 jobs will be created and $1.461 billion will be added to the GDP.

U.S. Biodiesel Industry is Facing Severe Economic Hardship: Despite recent growth, the industry is in the midst of an economic crisis. Plants are having difficulty accessing operating capital. Volatility in commodity markets and reduced demand for biodiesel in both domestic and global markets are making it difficult for producers to sell fuel. Lastly, uncertainty relating to federal policy that is vital to the industry's survival is sending inconsistent signals to the marketplace and undermining investor confidence in the industry.

If prolonged, this downturn will lead to a severe retraction in U.S. biodiesel production capacity. Due to current market conditions, less than one-third of the industry's facilities are currently producing fuel. NBB estimates that absent any change in federal policy, U.S. biodiesel production will likely fall to 300 million gallons in 2009, which would cost the U.S. economy more than 29,000 jobs. The ability to meet the advanced biofuels goals established in the 2007 Energy Bill could be threatened if today's economic crisis is not addressed.

A Reliable Policy Framework is Needed for U.S. Biodiesel Industry: The U.S. biodiesel industry is not seeking the creation of new programs. Instead, common-sense improvements and thoughtful implementation of existing initiatives will help the industry survive in this difficult economic climate. Specifically, a multi-year extension of the biodiesel tax incentive and successful implementation of a workable RFS-2 are needed if the nation is to reap the future economic, environmental, and energy security benefits associated with the production and use of biodiesel.

Extension of the Biodiesel Tax Incentive is Vital to the U.S. Biodiesel Industry: The biodiesel tax incentive is a $1 per gallon blenders excise tax credit that can be claimed on biodiesel produced from vegetable oils, animal fats and used restaurant grease (yellow grease). The incentive can also be claimed in the form of a general business income tax credit. To qualify for the tax incentive, the biodiesel must by statute meet both the ASTM D6751 fuel specification and the EPA registration requirements under Section 211 of the Clean Air Act. The incentive was enacted in 2004 as part of the American Jobs Creation Act (P.L. 108-357). The incentive was subsequently extended through December 31, 2008 as part of the Energy Policy Act of 2005 (P.L. 109-190). H.R. 1424, the Emergency Economic Stabilization Act of 2008 (P.L. 110-343) extended the incentive for another year through December 31, 2009.

The biodiesel excise tax credit is claimed at the point where biodiesel is blended with conventional diesel fuel. Blenders are required to register with the Internal Revenue Service (IRS) to claim the incentive. The excise tax credit can be used to offset a blender's fuel excise

tax liability. To the degree that the incentive exceeds excise tax liability, eligible taxpayers may claim a refund from the IRS. This structure accomplishes the incentive's policy objective of helping to make biodiesel price competitive with conventional diesel fuel.

If the tax incentive is allowed to expire at the end of the year, the price of biodiesel will be significantly higher than petroleum diesel, thus further reducing demand and making it nearly impossible for biodiesel plants to produce fuel at a profit. Thus, it is safe to assume that if the biodiesel tax incentive lapses, biodiesel production in the U.S. will halt or at a minimum be severely curtailed, and the energy security, environmental, and job creation benefits that the nation realizes from biodiesel production will be lost.

Further, the short-term nature of the incentive under current law inadvertently sends the signal to the marketplace that the federal commitment to biodiesel is tenuous. At a time when market conditions are less than ideal and investor confidence is strained, the temporary nature of the incentive undermines overall confidence in the stability of the industry. A multi-year extension of a reformed tax incentive that is structured in a manner to promote a stable, viable domestic industry would address this situation and allow the U.S. to reap the multiple long-term benefits associated with the enhanced production and use of biodiesel.

A Workable RFS-2 will Stimulate Domestic Demand for Biodiesel and Help Industry Survive Economic Downturn: The Energy Independence and Security Act (P.L. 110-140) significantly expanded and improved the Renewable Fuels Standard (RFS-2). For the first time, RFS-2 specifically requires a renewable component in U.S. diesel fuel as part of the program's Advanced Biofuels Schedule. Specifically, RFS-2 requires the use of 500 million gallons of Biomass-based Diesel in 2009; 650 million gallons in 2010; 800 million gallons in 2011; and 1 billion gallons in 2012. Between 2012 and 2022, a minimum of 1 billion gallons must be used, and the Administrator of the EPA has the authority to set the use requirement at a higher level. Fuel must reduce greenhouse gas (ghg) emissions by 50% compared to conventional diesel fuel to qualify for the program. The statutory Biomass-based Diesel requirement is the first component of the Advanced Biofuels Schedule to be implemented.

The NBB supports timely implementation of the RFS-2 schedule established in P.L. 110-140. EPA has crafted a Notice of Proposed Rulemaking (NOPR), and this proposed rule has been forwarded to the Office of Management and Budget (OMB) for review.

Although NBB has not yet had the opportunity to formally review a draft of the RFS-2 NOPR, EPA personnel through stakeholder meetings have provided us with information indicating that the NOPR as currently drafted disqualifies Biomass-based Diesel derived from vegetable oil, including domestically-produced soybean and canola oil, from the Biomass-based Diesel schedule. Vegetable oils account for more than sixty percent of the feedstock that is available to meet the RFS-2 Biomass-based Diesel targets, and the use requirements established by this component of the Advanced Biofuels Schedule simply cannot be met if these feedstocks are disqualified from the program. We are hard pressed to believe this potential outcome is consistent with the will of Congress or sound environmental policy that values the displacement of petroleum diesel with low-carbon renewable fuels.

As mentioned previously, fuel must reduce ghg emissions by 50% compared to conventional diesel fuel to qualify for the Biomass-based Diesel program. By statute, significant indirect emissions are to be considered as part of the ghg emission calculation. EPA has opted to account for Indirect Land Use Change (ILUC) in its ghg calculations as part of the rulemaking process. The result is that the EPA inaccurately attributes significant deforestation in South America to

the cultivation of oilseeds such as soybeans and canola produced in the U.S. Thus, under the EPA's forthcoming proposed rule for RFS-2, these feedstocks could be disqualified from the Biomass-based diesel program.

The science pertaining to *direct* emissions is well established. The USDA/DoE lifecycle was initially published in 1998, and has been continually refined and updated since this time. According to this model, biodiesel reduces ghg emissions by 78%.

However, the science surrounding ILUC is at this point unreliable, incomplete and inexact. Premature publication and use of specific ghg emissions calculations based on faulty ILUC assumptions will be harmful to the U.S. biodiesel industry, as it will undermine investor confidence and further deprive the industry of the investment capital it will need to meet the Biomass-based Diesel schedule required in RFS-2. The methodology ultimately used by EPA in the RFS-2 rulemaking will have a significant impact on the overall success of the program, and the science and methodology employed by EPA should be subject to thorough public and academic review before numerical values are assigned to specific renewable fuels. Accordingly, specific ghg reduction calculations attributed to ILUC should not be published at this time until the methodology EPA plans to employ to make these calculations are subject to a through public review.

Again, Chairwoman Velazquez, Ranking Member Graves and Members of the Committee, I sincerely appreciate the opportunity to testify before you today, and would be more than happy to answer any questions you may have.

Small Business Committee
United States House of Representatives

Hearing on
The State of the Renewable Fuels Industry in the Current Economy

Testimony of

Ron Litterer
Chairman, National Corn Growers Association

March 4, 2009

Madame Chair and distinguished members of the Committee, thank you for the opportunity to testify today on behalf of the National Corn Growers Association (NCGA), regarding the state of the renewable fuels industry in the current economy.

My name is Ron Litterer. I farm corn and soybeans near Greene, Iowa, where I also have a hog finishing operation and I appear before you today as the Chairman of the NCGA.

Background

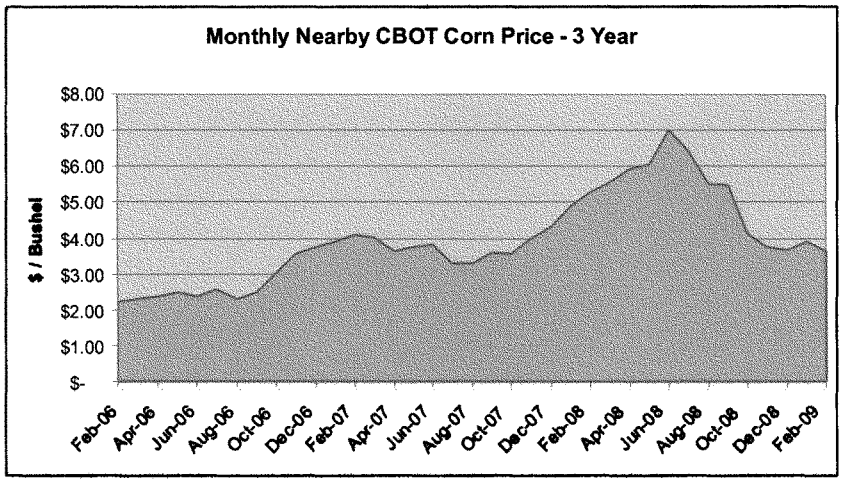
The National Corn Growers Association represents more than 32,000 corn farmers from 48 states as well as more than 300,000 farmers who contribute to corn check off programs and 26 affiliated state corn organizations across the country. The mission of NCGA is to create and increase opportunities for corn growers and to enhance corn's profitability and use.

For more than 20 years, NCGA has worked side by side with farmers, industry and government to build the ethanol industry from the ground up. Through our efforts, corn growers across the country and the ethanol industry have helped America move closer to energy independence. Our industry has been, and is currently a major force in the revitalization of rural America by creating green jobs and by stimulating economic activity in our communities. However, the corn ethanol industry, along with many others, is feeling pressure from the current economic downturn in the U.S. and world economies. It is imperative that, at a time when our country is facing a worsening economic crisis, we recognize the significant role the existing grain-based ethanol industry has in promoting, not only energy independence, but a more stable and prosperous U.S. economy.

The expansion of the U.S. ethanol industry has created significant economic activity across rural America. A recently released study by LECG found that in 2008, the ethanol

industry added $65.6 billion to the nation's Gross Domestic Product, and created nearly 494,000 new jobs in all sectors of the economy. [1]

During these uncertain economic times, corn growers and other agriculture producers continue to face a number of serious challenges. We, along with many industries, continue to face a very volatile marketplace. Over the past three years, the price of corn has seen a dramatic fluctuation. Nearby Chicago Board of Trade (CBOT) prices increased over 213 percent from February 2006 to June of 2008, a space of less than two and a half years. Thus in just 29 months, the cost of corn which accounts for the majority of production costs for a grain-based ethanol plant increased on the average of 7.4 percent per month. This included a period from October, 2007 to June of 2008, where corn prices increased $3.41, or more than 95 percent in 8 months. Unfortunately, the decrease from record highs has been almost as dramatic, with prices falling by $3.37 per bu., or more than 48 percent over the past 8 months.



Another factor that is often overlooked in this debate is the soaring cost of inputs for farmers, including energy for fertilizer, irrigation, powering farm equipment, drying grain and producing ethanol. Though our efficient use of these inputs is constantly improving, the price of energy inputs continues on an upward trend.

Corn input costs are established as much as a year before cash sales take place. At today's market prices, we are well below our production costs.

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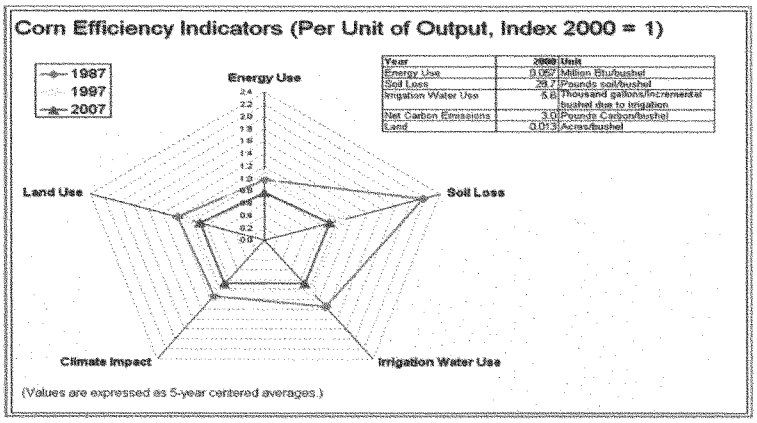
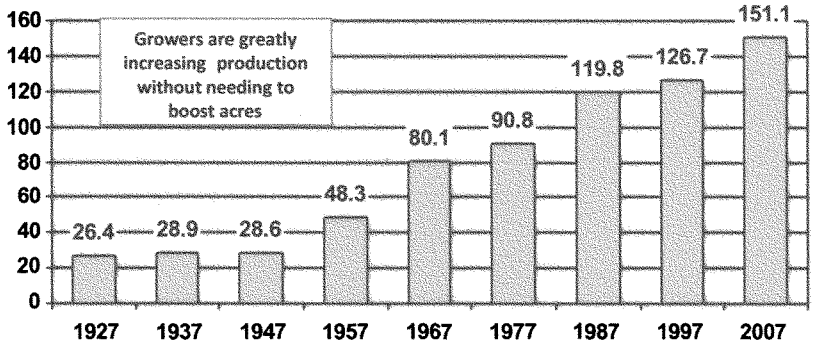
[1] *Contribution of the Ethanol Industry to the Economy of the United States*, Dr. John Urbanchuk, Director, LECG, LLC, February 23, 2009.



Despite tough economic times, corn production is becoming increasingly more efficient. Today biotechnology enables farmers to apply fewer inputs to produce larger crops on the same land. Currently it takes about 40 percent less land to grow a bushel of corn than in 1987, and energy used to produce a bushel of corn has fallen by an average of 50 percent. According to Keystone Center "Field to Market" Report released in January 2009, the production of corn in the U.S. has made significant measurable improvements in reducing energy, water, land use and carbon emissions. In order to maintain our sustainability improvements at the production level it is imperative that the corn ethanol industry continue to grow and prosper.



Current Economic Condition

Since passage of the expanded Renewable Fuels Standard (RFS) in the Energy Independence and Security Act of 2007, the economic situation for many corn growers and ethanol producers has deteriorated as a result of the current economic crisis. Fewer miles driven, decreased oil prices, and expanding ethanol production are all putting significant pressure on corn and ethanol prices.

Recently, the U.S. renewable fuels industry has been devastated by the scarcity of both short-term credit to finance operations and long-term capital to finance expansion and new construction. With a near complete lockup of the financial markets, existing and future biofuels producers are often unable to secure necessary financing to maintain operations at existing facilities. This tight capital environment has pushed the industry to the brink, with many ethanol plants being forced to shut down, layoff staff and restructure their debt. Many banks which had previously extended credit to these companies are being forced to re-categorize the debt as non-performing and have become reluctant to extend additional credit to keep these businesses operating.

There is no doubt that Rural America, along with the rest of the country, is undergoing a time of tremendous economic challenge. It is for this reason we would like to highlight the important impact that farmer-owned, homegrown fuel production has in bringing opportunity to the Main Streets of rural America. The role of the American farmers is changing, growing to encompass providing food, fiber, feed, and fuel for our country. With the help of the U.S. biofuels industry, our nation's rural economy is providing more opportunities for farmers through homegrown renewable energy development. However, the well-being of our industry is threatened today by the declining state of our nation's economy.

In a November 2008 report by Dr. Cole R. Gustafson entitled "*Financing Growth of Cellulosic Ethanol*," Dr. Gustafson noted that, "Now when the industry is experiencing marginal profitability but requires significant capital to adopt new technology, firms have only modest equity to form a new borrowing base." The continued economic vitality of the U.S. renewable fuels industry is crucial for attracting the investment in research and development of second generation renewable feedstocks and the capital necessary to build the production capacity and infrastructure necessary to meet the 36 billion gallons of renewable fuels by 2022 proscribed by the Energy Independence and Security Act of 2007. For that reason, it is imperative that the existing grain-based ethanol industry and the accompanying infrastructure that has been built around that industry continue to prosper and remain viable in order to serve as the bridge for the next generation of biofuels.

The Future of the Industry

With the expansion of the ethanol industry, we are quickly approaching the maximum amount of ethanol that can be blended into conventional vehicles (commonly referred to as the "blend wall"). To date there is currently more than 12 billion gallons of ethanol production capacity online, with an additional 2 billion gallons under construction. Given the downturn in the economy, ethanol production capacity is quickly reaching the 10 percent (artificial) blend wall. For the first time in years, Americans are driving less than the previous year. U.S. gasoline consumption in 2009 and 2010 is projected to be 6 percent below 2007 levels. This decrease in gasoline consumption will accelerate the coming of the blend wall. It is critical that all public and private stakeholders work together to quickly solve this issue. Moving to higher blends of ethanol is critical to the sustained health and expansion of corn and cellulosic ethanol production in the U.S.

The U.S. currently uses roughly 138 billion gallons of gasoline each year. Given the 10 percent blend wall, this means that it will take approximately 13.8 billion gallons of ethanol to saturate the existing E10 market. In the near term, efforts are underway to increase the amount of ethanol that can be used in conventional automobiles. In the longer term, efforts are being made to rapidly expand to the number of flexible fuel vehicles (FFVs) and higher blends infrastructure to ensure sufficient demand in the United States automobile fleet.

NCGA fully understands and appreciates that with sound science and a transparent process, the U.S. Environmental Protection Agency, together with the U.S. Department of Energy and the U.S. Department of Agriculture, will work with stakeholders in the renewable fuels industry to move toward higher blends of ethanol in our nation's gasoline supply.

In conclusion, NCGA sees the grain based ethanol industry as a critical part of domestic energy security. Its inclusion as part of the nation's energy policy has strengthened and further diversified our nation's fuel supply in a time of global volatility and increasing demand for energy. Finally, despite these trying times corn growers will continue to meet the growing demands of food, feed and fuel in an economical and environmentally responsible manner.

I thank the committee for its time and look forward to any questions you may have.

Written Testimony of Brooks Hurst, Tarkio, MO, 3/4/2009

My name is Brooks Hurst I farm in northwest Missouri (Tarkio, MO). In addition to serving on the board of a majority farmer-owned biodiesel production facility located in Kansas City, Mo., I am also invested in several other new-generation cooperatives and limited liability companies. I was asked to testify about the impact the economic downturn has had on the biofuels industry.

Because I am more involved with the biodiesel industry than I am ethanol, I will focus on biodiesel. However, I do believe that I can accurately answer any questions the Small Business Committee might have about liquid biofuels and/or direct the members to helpful resources.

For clarification: biodiesel is made from vegetable oil and most of this oil comes from soybeans, although any fatty acid can be utilized. Biodiesel is blended with petroleum-based diesel fuel and can power any vehicle or piece of machinery that has a diesel engine. Ethanol is alcohol that is distilled from a sugar or starch-based mash. Corn is currently the most economically feasible feedstock for ethanol production. Ethanol is blended with gasoline for use in cars and light-duty trucks that have gasoline engines.

These two fuels represent real technology that we are able to produce now. Biofuels are reducing our dependence on foreign oil, adding to our fuel supply and creating jobs by encouraging the proliferation of "bio-refineries" in the rural areas of this nation. And the displacement of fossil fuels with these renewable fuels is good for our environment. For every unit of energy that is used for drilling, transporting and refining gasoline, only 0.9 of a unit is gained. With tillage, fertilizer, processing, etc., figured-in, ethanol yields 1.2 units of energy for every unit of input. Biodiesel's return on energy investment is even more impressive. From field to fuel tank, biodiesel gives 3.5 units for every unit of energy while reducing the carbon footprint for every gallon by 70 percent.

While I'm dispelling misinformation, I will also mention that there is no food vs. fuel issue when it comes to biodiesel. The following figures can also aid in demonstrating the impact that commodity prices have on the biodiesel industry.

Whole soybeans are rarely fed to animals or eaten by people. The beans are processed (crushed) to separate the oil (20 percent of the soybean itself), meal (75 percent), and hulls (5 percent). More than 95 percent of all domestically-produced soybean meal is fed to livestock, but it can also be made into soymilk, tofu, etc. The hulls are fed to animals and have the same market value as corn. Only the soybean oil is used to make biodiesel. In other words, for every unit of biodiesel produced, there are more than three times as many units of feed and/or food produced. What about cooking oil? Used cooking oil is also utilized to make biodiesel. So, foods can be fried in oil, and then the oil can be made into biodiesel. The more soybeans we grow for vegetable oil to be processed into biodiesel, the more feed and food is produced. The biodiesel industry provides food, feed, AND fuel.

Every 60-pound bushel of soybeans yields approximately 1.5 gallons of soybean oil which subsequently yields 1.5 gallons of biodiesel. The formula for biodiesel is simple: 90 percent fatty acid + 10 percent alcohol + catalyst = 90 percent biodiesel and 10 percent glycerin. I will expand on the role glycerin plays near the conclusion of this testimony. Soybean oil weighs approximately 7.5 pounds per gallon. If you multiply 7.5 by the Chicago Board of Trade price for soybean oil, which gives you a rough idea of the break-even price for biodiesel.

It is understandable that commodity prices, along with fuel prices, have the greatest impact on the feasibility of the biofuels industry. I don't know how direct the relationship is between the economy and fuel prices, but the dipping petroleum market has affected our bottom line as much as high feedstock prices did over the summer.

The situation in the world of finance has affected many biofuels operations also. At a time when a great deal of operating capital is/was required to pay for margin calls or to simply keep the operation afloat, lenders tightened the purse strings. Even though interest rates are low, financial institutions are not willing to loan the money. I know of an example where a loan on a biodiesel plant was purchased by a large firm who put a stop to the farmer-owned plant borrowing money from a local bank. However, the new financer would not extend operating capital to the plant. The biodiesel cooperative is now trying to squeeze more money from its original investors. They have no other option!

I also know of a large scale, farmer-owned biodiesel production facility for which 40 percent of the capital requirement for construction was met by farmer-investors. Three years ago, when the shares were sold to farmers, diesel prices at the pump were around $3 per gallon and soybean oil prices were around $0.28 per pound. With the Dollar Blenders Credit from the Federal Government, the future looked bright for biodiesel investors and financers were knocking on doors wanting the business of these co-ops and LLCs. We all knew things would tighten-up, but we didn't know how dramatically. This particular group had three different lenders willing to put up 60 percent of the capital. Their equity drive closed and construction started at about the same time that commodity prices began to climb. Those lenders all raised their required interest rates which prolonged negotiations and before an agreement was reached with one of the firms. Soybean oil prices were over $0.70 per pound and projected margins were thin. New lenders were courted, but then the financial world collapsed. The plant is now partially built, but the capital raised has been depleted and the construction crews have been sent home until further capital is raised or a lender steps forward.

I have been fortunate to be involved in business models with a better position in the industry. But, things are still tough. Nationally, biodiesel's production capacity is near 2.55 billion gallons per year; however, actual production was approximately 700 million gallons in 2008. Still, biodiesel was able to displace more than 20 million barrels of petroleum in 2008. These numbers help to show that there is great potential to increase the level of U.S. biodiesel production and reduce dependency on foreign oil when

operating capital is available and/or the markets are not as volatile as they are today. For ethanol, approximately 9.5 billion gallons were produced in 2008, which displaced more than 300 million gallons of foreign oil.

One 30-40 million gallon biodiesel plant that is integrated with a soybean crush facility will employ over 50 individuals with a payroll of over $2 million annually. The construction of that plant provided jobs and transportation jobs have been created as a result of the transfer of goods in and out. The demand for soybeans is higher and the feed for animals is cheaper because the plant was built. Those additional profits combined with the earnings from the farmer-owned facility are reinvested in rural communities, creating retail and service jobs. That exemplifies why it is critical to keep the biofuels ball rolling.

I suppose the government has done everything possible to encourage lenders to extend operating capital to existing biodiesel and ethanol production facilities. If not, those avenues need to be explored to maintain the industry we have created and which has truly had a positive impact on Rural America and our nation as a whole. There is no need to throw money at "pie-in-the-sky programs" when we have part of the answer to our future energy needs at hand.

Aside from the requirements for capital and financing, three recommendations for the committee and the federal government come to mind: extension of the federal Biodiesel Blender's Credit, inclusion of glycerin in the federal Bio-based Fuel Blender's Credit and implementation of the Renewable Fuels Standard. I believe that biofuels producers who make it through this volatile shake-out period will be successful long term. Extending and properly implementing the programs already in place can aid this fledgling industry.

One of the biodiesel plants I am involved in is finding it difficult to book business forward because of the uncertainty of the continuance of the Biodiesel Blender's Credit program. If extended for three more years, operations could minimize their risks by contracting forward. It would also assure lenders that projections relying on the credit were accurate and that possible market implications were not a nearby concern.

Likewise, if the Department of Revenue would decide that glycerin is eligible for the fifty-cent Bio-based Fuel Blending Credit, it would establish a floor for the price of the co-product coming out of biodiesel plants. There are many uses for glycerin, but its pricing has fluctuated as greatly as the petroleum and commodity markets. Glycerin is being successfully utilized as a fuel conditioner in #4 fuel oil. It works as a fuel when blended at 20 percent in burners that fire asphalt plants. It is bio-based and there is no reason why it should not be eligible for that tax credit program. Inclusion in the tax credit program would also help the Environmental Protection Agency move their classification of glycerin from a waste product to a fuel.

Finally, implementing the Renewable Fuel Standard that Congress passed in the latest Energy Bill would help to provide additional support for the nation's biofuels producers. The specifics for the enforcement of the RFS are still to be determined, but we need it to

be enacted as soon as possible. Even when biofuels have been less expensive than petroleum based fuels, we have seen petroleum companies resist making biodiesel or ethanol available to consumers. The RFS is necessary to help the free market because petroleum companies have a monopoly on the distribution infrastructure.

Making biofuels available to the public and increasing domestic demand is more important than ever. All exports of biodiesel to Europe have been stopped as of the first of the year pending determinations on trade conflicts between U.S. biodiesel producers and the European Union.

I believe that we, as a nation, stand at a crossroads. The decisions that are made today will impact this country for years to come. It is my hope that my testimony will help demonstrate the importance of the biofuels industry and that the Small Business Committee will consider my recommendations. It is crucial that we work together to ensure that the U.S. biofuels industry continues to play an important role in rural development and growing our fuel supply.

ENVIRONMENTAL WORKING GROUP THE POWER OF INFORMATION

Published on Environmental Working Group (http://www.ewg.org)

Ethanol's Federal Subsidy Grab Leaves Little For Solar, Wind And Geothermal Energy

Published January 8, 2009

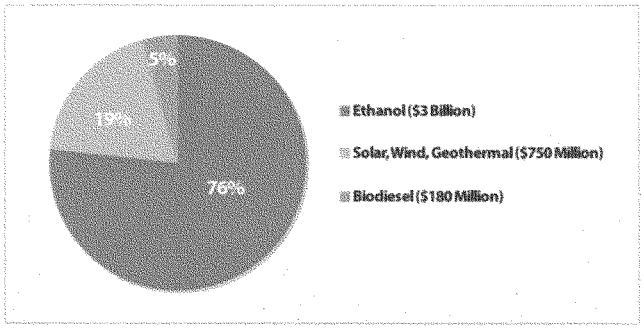
Ethanol's Federal Subsidy Grab Leaves Little For Solar, Wind And Geothermal Energy

As Congress and the incoming Obama administration plan the nation's next major investments in green energy, they need to take a hard, clear-eyed look at Department of Energy data documenting corn-based ethanol's stranglehold on federal renewable energy tax credits and subsidies.

Solar, wind and other renewable energy sources have struggled to gain significant market share with modest federal support. Meanwhile, corn-based ethanol has accounted for fully three-quarters of the tax benefits and two-thirds of all federal subsidies allotted for renewable energy sources in 2007.

A little noticed analysis buried in an April 2008 report from the federal Energy Information Administration (EIA)[1] shows that the corn-based ethanol industry received $3 billion in tax credits in 2007, more than four times the $690 million in credits available to companies trying to expand all other forms of renewable energy, including solar, wind and geothermal power.

Ethanol Got 76% ($3 Billion) of All Federal Renewable Energy Tax Credits in 2007



The federal bill for ethanol subsidies grows with every gallon of ethanol produced. By 2010, ethanol will cost taxpayers more than $5 billion a year -- more than is spent on all U.S. Department of

Agriculture conservation programs to protect soil, water and wildlife habitat.

Now the ethanol industry wants even more. In recent weeks, the corn ethanol lobby has pushed for billions in new federal subsidies as part of the economic stimulus package. Corn growers and ethanol companies are also pressing for dramatic increases in the amount of ethanol Americans will be required to put into their gas tanks—even if it results in worse fuel economy and more engine repairs. Once touted as the energy equivalent of a free lunch, corn ethanol has proved to be an over-hyped and dubious renewable energy option. Ethanol made from corn has extremely limited potential to reduce the country's dependence on imported oil, and current production systems likely worsen greenhouse gas emissions.

Moreover, despite billions in federal subsidies on top of a government mandate that forces motorists to buy ethanol, the industry's financial outlook remains highly unstable. A fleeting few years of windfall profits and breakneck construction of ethanol plants gave rise to talk of "sheikdoms" springing up in the Midwest to rival those in the Middle East and a "rural renaissance" featuring hundreds of thousands of new jobs.

But that was last year. Today, a glut of ethanol, abruptly lower gasoline prices and wild swings in the corn market have caused the ethanol industry's profit margins to evaporate, hammered its stock values, triggered major bankruptcies and shredded ambitious plans to construct dozens of new plants.

Hence the latest burst of special pleadings from the ethanol lobby. Its spokesmen have floated a proposal for billions more in taxpayer handouts via the economic stimulus bill, and they want an expanded government fiat that would require drivers to use as much as twice the ethanol that Washington currently dictates.

Even if Washington rejects the industry's latest wish list out of hand, the nation will still be saddled with a lopsided incentive structure that has rewarded politically powerful, subsidy-dependent ethanol producers at the expense of a diversified and sustainable energy future. America can do better.

The changes we need to make sustainable energy a reality:

- Phase out tax credits for corn ethanol and subsidize other biofuels only if they show clear promise to meet strict climate and environmental protection standards.
- Rebalance the U.S. renewable energy and energy conservation portfolio to favor options that do the most to reduce fossil fuel use, safeguard the environment, spur more widely-shared economic development and increase energy security.

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[1] Energy Information Administration, U.S. Department of Energy. Federal Financial Interventions and Subsidies in Energy Markets 2007. SR/CNEAF/2008-01. April 2008.

Background

ETHANOL'S FEDERAL SUBSIDY GRAB LEAVES LITTLE FOR SOLAR, WIND, AND GEOTHERMAL ENERGY

The Environmental Working Group (EWG) recently released a report detailing how much federal support was provided to different forms of renewable energy in 2007. The EWG report was based on a little noticed report from the Energy Independence Administration (EIA) published in April 2008. This report provides more detail on the data presented in the EWG report.

The EIA Report

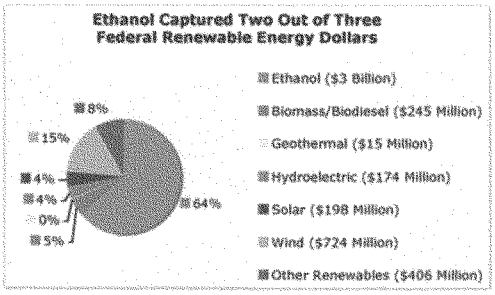
The Energy Information Administration (EIA)[1] reported that the federal government provided just over $4.8 billion in support for renewable energy in 2007. The federal government supported renewable energy in four ways:

1. Direct Expenditures—Federal programs that provide funds that ultimately result in a direct payment to producers or consumers of energy.
2. Tax Expenditures—Tax credits, exemptions and other provisions in the federal tax code that reduce the tax liability of firms or individuals.
3. Research and Development—Federal expenditures focused on a variety of goals such as increasing energy supplies and improving efficiency.
4. Regional Electricity Programs—Federal support for electricity production through the Tennessee Valley Authority and the Department of Energy's four regional power-marketing administrations.

A closer analysis of the data in the reports reveals that corn ethanol has captured most of the federal support for all forms of renewable energy.

Ethanol Captured Two-thirds of Federal Support for Renewable Energy

The federal government supports a variety of renewable energy sources to produce electricity, liquid fuels, and other forms of energy. The EIA study shows that corn ethanol captured two out of three federal dollars used to support all types of renewable energy in 2007 through tax benefits, research and development, regional electricity programs and direct payments to producers or consumers of renewable energy.



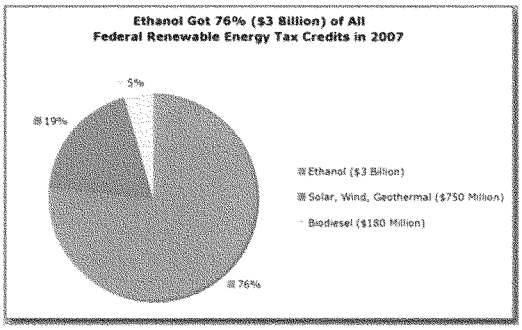
Wind energy received only 15 percent of all federal renewable energy support and solar energy only 4 percent. All renewable energy sources other than corn ethanol got a combined 36 percent of all federal support for renewable energy in 2007.

Energy Type	$ Millions	Percent
Ethanol ($3 Billion)	$3,040	64%
Biomass/Biodiesel ($245 Million)	$245	5%
Geothermal ($15 Million)	$15	0%
Hydroelectric ($174 Million)	$174	4%
Solar ($198 Million)	$198	4%
Wind ($724 Million)	$724	15%
Other Renewables ($406 Million)	$406	8%
Total	$4,802	

Ethanol Captured 75 Percent of Tax Benefits for Renewable Energy.

Tax benefits¾credits, rebates, and measures that reduce the amount of taxes a producer or consumer owes¾are by far the most important way the federal government supports renewable energy. Tax benefits made up 81 percent of the value of all forms of federal support for renewable energy in 2007.

The EIA study shows that corn ethanol captured 75 percent of all these federal tax benefits through the Volumetric Ethanol Excise Tax (VEETC). The VEETC is commonly known as the blender's tax credit, because it affords oil refiners a tax credit of 51 cents for each gallon of ethanol blended with gasoline.[2] In 2007, oil and ethanol interests claimed $3 billion in blender's tax credits¾the single largest federal expenditure for renewable energy that year. In addition to the blender's tax credit, ethanol producers claimed $50 million through the Alcohol Fuel Tax Credit.



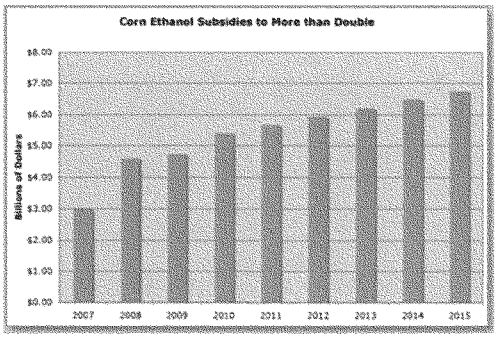
The most important federal subsidy for wind, solar, geothermal and other renewable technologies to produce electricity is the Production Tax Credit. This credit provides a 1.5 cents-per-kilowatt-hour payment (adjusted annually for inflation) to private investors and investor-owned electric utilities that use renewable energy sources including wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation power, municipal solid waste, landfill gas, refined coal, Indian coal, solar energy and hydropower. Electric utilities claimed $690 million in tax credits for renewable energy in 2007, less than one-fourth of the tax credits for corn ethanol. Renewable electric energy production was also supported through the tax credits to holders of Renewable Energy Bonds, which help finance renewable energy projects. This tax credit was worth $60 million in 2007.

Biodiesel production was supported by three tax credits in 2007. A tax credit of 50 cents was provided for each gallon of biodiesel blended with conventional diesel. Another tax credit was available to businesses that use, sell, or trade biodiesel as a motor vehicle. That tax credit was $1 per gallon for biodiesel produced from agricultural crops and 50 cents per gallon for biodiesel produced from waste oils or other nonagricultural feedstocks. The total support for biodiesel from all three tax credits was $180 million in 2007.

Tax Credit	$ Millions	Percent
Ethanol Blender's Tax Credit	$2,990	75%
Alcohol Fuel Tax Credit	$50	1%
Production Tax Credit	$690	17%
Renewable Energy Bond Tax Credit	$60	2%
Biodiesel and Agri-Biodiesel Tax Credit	$180	5%
Total	$3,970	100%

Corn Ethanol Tax Subsidies Will More Than Double by 2015

The blender's tax credit increase with each new gallon of ethanol produced. Moreover, the Energy Independence Act of 2007 ***requires*** that more and more corn ethanol be used each year until topping out at 15 billion gallons in 2015. This means the annual tax bill for taxpayers will also grow each year, from $3 billion in 2007 to almost $7 billion in 2015.



By 2010, ethanol will cost taxpayers more than $5 billion a year¾more than is spent on all U.S. Department of Agriculture conservation programs to protect soil, water and wildlife habitat. Meanwhile, intensification of corn production to supply the ethanol required by the 2007 Energy Independence Act threatens those same resources.

Year	Ethanol Production Required (Billions of Gallons)	Tax Bill ($ Billions)
2007		$2.99
2008	9.00	$4.59
2009	10.50	$4.73
2010	12.00	$5.40
2011	12.60	$5.67
2012	13.20	$5.94
2013	13.80	$6.21
2014	14.40	$6.48
2015	15.00	$6.75

[1] Energy Information Administration. Federal Financial Interventions and Subsidies in Energy Markets 2007. SR/CNEAF/2008-01. April 2008.
[2] The 2008 farm bill reduced the blender's tax credit to 45 cents per gallon, beginning in 2009.

Source URL:
http://www.ewg.org/node/27498
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March 3, 2009

The Honorable Nydia Velazquez
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairwoman Velazquez,

On behalf of the Society of Independent Gasoline Marketers of America ("SIGMA"), I am writing to convey some industry concerns with the implementation of the Renewable Fuel Standard. SIGMA represents over 270 motor fuel marketers and sells between twenty to thirty percent of the liquid motor fuel sold in the United States. As you are aware, Congress passed the Energy Independence and Security Act ("EISA") in December of 2007. Among other provisions, EISA contained an increase in the mandate for the production and use of biofuel. While motor fuel marketers are indifferent to the use or sale of biofuel, they cannot meet this increased mandate without significant changes to the current law.

EISA requires the country to produce and use 36 billion gallons of renewable fuel by 2022. To date, the most successful biofuel blend in the United States is an E-10 blend, composed of ten percent ethanol and ninety percent "regular" gasoline. The motor fuel industry sold 150 billion gallons of gasoline in 2007. Assuming that every gallon of gasoline was comprised of an E-10 blend, that would put to use only 15 billion gallons of ethanol. Therefore, to meet the mandate a higher blend (i.e., mid-level blend) must enter the system or the use of E-85 must dramatically increase. It is at this point that motor fuel marketers face significant challenges.

Currently, Underwriters Laboratories ("UL") certifies all equipment for the use and sale of motor fuel. UL has only certified fuel blends up to ten percent ethanol to date for use in standard equipment. Therefore, selling any blend higher than ten percent from "normal" equipment is not certified and breaking state and local fire code. Even E-85 equipment, which is manufactured differently from regular gasoline to handle the more corrosive nature of higher ethanol blends, is not certified. This lack of certification translates into a major liability for the motor fuel marketer.

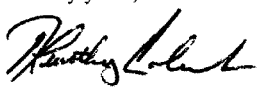
Additionally, flex fuel vehicles ("FFV") are the only vehicles able to use blends higher than E-10 without voiding their warranties—about three percent of the current fleet are FFVs. This should concern Congress because there are currently not enough vehicles on the road able to consume the mandated amount of renewable fuel. Retailers are concerned by this fact as well

as the additional liability placed on them should a consumer choose to put a higher blend in a non-FFV. If a consumer uses E-85 or any other mid-level blend in a non-FFV, the retailer is subject to a misfueling violation for voiding the consumer's warranty. The motor fuel industry does not feel that with the proper labeling, the retailers should be held liable for the consumer's mistake.

Finally, the cost to install equipment able to handle higher blends of renewable fuel is very expensive for retailers, most of whom fall into the "small business" category. The average convenience store made $33,000.00 in pre-tax profit last year. To install new equipment can range anywhere from $100,000.00 to $200,000.00. This investment is incredibly difficult if not impossible for the average retailer. While Congress did provide grant programs in EISA to ease this upfront expense for renewable fueling property, those grants have not been fully funded. The industry would recommend funding those grants at their maximum levels.

As always, SIGMA is grateful for the sound minds representing our voice on Capitol Hill and we are hopeful that you and your colleagues will take these concerns into consideration as a comprehensive energy package is developed this year. Please be in contact and let us know if we can provide you with any further information to be of assistance.

Sincerely yours,



R. Timothy Columbus
Counsel
Society of Independent
Gasoline Marketers of America

Statement for the Record
Aristides A.N. Patrinos, Ph.D.
President, Synthetic Genomics Inc.
House Committee on Small Business Hearing entitled:
"The State of the Renewable Fuels Industry in the Current Economy"
March 4, 2009

Chairwoman Velazquez, Ranking Member Graves, members of the Committee: thank you for holding this important hearing today on the state of the renewable fuels industry in the current economy.

President-elect Obama and congressional Leadership crafted and enacted a financial recovery plan that not only will create jobs in the short-term but also spur economic growth and competitiveness in the long-term. They have also expressed a clear understanding of the relationship between energy security and economic security, of the idea that tackling climate change and the economic crisis need not be and cannot be mutually exclusive endeavors.

Americans deserve a reinvigorated economic and energy playbook that nurtures new generations of biofuels and bioenergy. Hearings like this one can help shed a light on how access to capital and other economic factors are hindering development and deployment of that playbook. We at Synthetic Genomics believe addressing our climate and energy challenges can make our nation more competitive. We believe, in other words, that green can be gold.

Transitioning to a low-carbon economy means investing in a wide range of renewable energies, which in turn has the potential to enhance economic competitiveness, create millions of new jobs and save our planet in the process. As the government implements its critically important economic stimulus package, we urge policymakers to not overlook biology, which is emerging as the science that will most likely contribute the positive "disruptive" technologies to mitigate catastrophic climate change. The scientific revolution born from sequencing the human and other genomes has spawned the opportunities that will lead to such disruptive technologies.

For example, we are developing a "carbon dioxide as a renewable feedstock" program, which would capitalize on the genomics revolution to produce algae and other photosynthetic organisms that can convert carbon dioxide into a range of liquid fuels with high efficiency. Talk about a win-win: this holds the promise of addressing the twin challenges of producing a clean renewable fuel while also solving some of the problems of carbon capture and storage. The fuels may include jet fuel, butanol, octanol, ethanol, and others. There will be no competition with land used for food production. The production system will be based on closed bioreactors employing innovative engineering designs to optimize the use of sunlight, land, and water.

We're also developing a "cleaner coal conversion program," which employs the tools of the genomics revolution to discover unique microbial assemblages that can digest coal

with high efficiency and convert it to a series of both gaseous and liquid fuels as well as to several specialty biochemicals. These fuels and chemicals can begin replacing those produced by the petrochemical industry, thereby beginning to free us from dependence on imported oil.

The U.S. has significant amounts of coal, guaranteeing almost a century of a home-grown feedstock. Furthermore, the biochemical tools and methods derived from advances in genomics assure environmentally benign methods of coal conversion, thus preserving ecological integrity. The plan is to mine the coal and set up conversion facilities at the coalmine mouths. Gas or liquid distribution systems can then deploy the fuels and high value specialty chemicals to their appropriate destinations. This is work that can begin to rejuvenate the coal industry – which, in turn, could lead to the creation of thousands of new jobs. A clean way to use this national resource would be a giant step towards our energy independence and economic stabilization.

Madam Chairman and Members of the Committee, with energy security and climate change, there will be no silver bullet. That's why your focus on how the economic downturn is affecting small renewable fuels companies is so important. Moving away from oil and creating new green industries with the potential to launch millions of new jobs will require hundreds or even thousands of solutions. We'll need silver buckshot.

And that buckshot will come primarily in the form of cutting-edge technologies from our nation's small business sector, businesses like ours staffed by scientists at the forefront of our field, who stand ready with options that do not compete with food and are truly renewable. But we need your help in leveling the playing field for all technologies that address these challenges. If the renewable fuels industry is to survive the economic downturn, we can no longer distort free market processes through tariffs and tax credits and mandates that favor one alternative over others.

Thank you.

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