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FULL COMMITTEE HEARING ON CLIMATE CHANGE SOLUTIONS FOR SMALL BUSINESSES AND FAMILY FARMERS

HEARING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

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FULL COMMITTEE HEARING ON CLIMATE CHANGE SOLUTIONS FOR SMALL BUSINESSES AND FAMILY FARMERS

Wednesday, April 29, 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, Dahlkemper, Bright, Graves, Luetkemeyer and Thompson.

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

Within the scientific community, a clear consensus has formed about the need to address the dangers of climate change. The effects of global warming are indisputable, from rising sea levels, to increasingly violent natural disasters. Repercussions like these will be disastrous, not only in terms of human suffering, but also for our global economy.

Across the country, America's small businesses are stepping up to help address this problem. Today, the Chicago Climate Exchange boasts 3,500 members, and trades $9 million worth of carbon offsets. That is enough to mitigate annual emissions for 320,000 cars. Entrepreneurs and family farmers are pioneering innovative ways to reduce carbon in the atmosphere. Whether it's trading carbon credits, or developing renewable fuels, small firms everywhere are making critical investments in a greener future.

If it's done right, reducing greenhouse gas emissions will mean more opportunities for our small business economy. As legislation to address climate change goes forward, we need to make sure that the final proposal not only protects our environment, but creates jobs. Properly constructed legislation will result in a win-win. It will expand small business jobs, while protecting the planet.

Despite these opportunities, some businesses understandably worry about the expense of addressing climate change. And, of course, it is important that entrepreneurs not be unfairly burdened as we transition to a carbon constrained economy. Let's not forget, small businesses are some of the largest energy consumers, so we need to carefully consider how capping carbon emissions will affect them.

In grappling with these issues, one thing has become clear—the only option not on the table is doing nothing. For better or worse,

the EPA's recent decision to classify carbon dioxide as a dangerous pollutant means that it will now be regulated under the Clean Air Act. The Clean Air Act laws, which were enacted in 1970, simply were not written with this purpose in mind. Trying to regulate carbon dioxide emissions through the existing Clean Air Act laws is trying to put a square peg in a round hole. That means, the question is no longer if we're going to reduce greenhouse gas emissions, but rather when, and how.

If we are going to both address climate change, and create new growth opportunities for small businesses, leadership will be required on all fronts, not just from EPA, but from Congress, as well. That is the right way to go about this monumental task.

The panel before us today can testify about some of the ways in which small businesses and family farmers are pioneering the green revolution. I look forward to hearing about their experiences in the growing field. However, if they are going to continue this impressive work, they will need the proper support from all of us.

I thank our witnesses for being here today, and I yield to Ranking Member Graves for his opening statement.

Mr. GRAVES. Thank you, Madam Chair. Good afternoon, everyone, and thank you for participating in today's hearing. And I want to thank Chairwoman Velázquez for holding this timely hearing.

The debate on climate change has shifted from the global cooling concerns of the 1970s to global warming today. There seem to be a broad consensus that human activities are increasing carbon dioxide emissions into the atmosphere. However, debate continues on how much those emissions are changing the climate, at what rate it is changing, and what effects are exactly are going to be.

It seems that you can find a statistic or a scientist that can support any position on climate change. And with such variation among scientists, I think it's important that we take a very calculated approach towards addressing climate change.

Dramatic new requirements for industry can also have devastating effects on the economy, both for business, and for consumers. Studies suggest that taxes from proposed climate change legislation could cost the American household thousands of dollars per year in increased energy bills. Revenues would be collected from new mandates on industry, and the cost would be passed on to the consumer, both residential, and commercial.

Considering the lagging economy, this is something that I look at as to be a big question; is this something we want to do? And when other countries, like China and India, don't have the same strict caps, are we putting businesses in an unfair advantage here in the United States?

Besides these concerns, I also find alarming that nuclear power is not being considered as a renewable fuel source. If reducing CO2 emissions is truly a goal, then ignoring nuclear power is a big mistake, given it already provides this country with 20 percent of its electricity. Simply allowing nuclear power to meet new renewable electricity standards, I think would moderate costs to consumers.

Real solutions need to take into account regional differences throughout the country, take advantage of clean fuel within our borders, including natural gas, and nuclear power, offer incentives,

and carefully consider how our economy will be impacted, both domestically, and internationally.

And, again, thank you, Chairwoman, for holding this hearing. I look forward to the testimony.

Chairwoman VELÁZQUEZ. Thank you. And I welcome our first witness, Mr. Fred Yoder. He is a corn farmer from Plain City, Ohio. Also, he is the past President of National Corn Growers Association, and current member of the 25x25. Mr. Yoder also is part of a new task force, NCGA, established to evaluate climate issues. The NCGA represents more than 32,000 corn growers from 48 states.

Welcome, sir. You have five minutes to make your statement.

STATEMENT OF FRED YODER

Mr. YODER. Thank you, Madam Chair, and Ranking Member Graves. It's a pleasure for me to be here, and I appreciate the remarks that you both have shared with us.

Thank you for the opportunity to testify today on behalf of the National Corn Growers Association regarding climate change solutions for small businesses and family farmers. I applaud the Committee's efforts to focus attention on the important role the agriculture industry has in the area of climate change and the issues facing rural America.

I grow corn, soy beans, and wheat near Plain City, Ohio, and I've been an active participant in climate change discussions for many years. In December, I had the opportunity to attend and participate in the United Nations World Climate Conference in Poland, where I was able to discuss the role of agriculture in reducing greenhouse gas emissions. Also, in addition to being part of NCGA's efforts, like you said, Madam Chair, I serve on the boards of numerous other ad hoc groups, including 25x25 Working Group for Carbon, and also the Ag Carbon Market Working Group here in D.C.

I feel strongly that as Congress moves forward on climate legislation, that agriculture should be considered as a significant part of the broader solution as we evaluate ways to reduce greenhouse gas emissions. Our nation's corn growers can play a major role in a market-based cap and trade system through sequestering carbon on agricultural lands. Numerous economic analyses have shown that a robust offset program will significantly reduce the cost.

In the near term, greenhouse gas reductions from livestock and agricultural conservation practices are the easiest, and most readily available means of achieving reductions on a meaningful scale. EPA estimates that ag and forestry lands can sequester at least 20 percent of all annual greenhouse gases here in the United States.

Further, agricultural producers have the potential to benefit from a properly crafted cap and trade system. Given those opportunities, it's critical that any climate change legislation seeks to maximize agriculture's participation and insure greenhouse gas reductions, while also sustaining a strong farm economy.

For years, corn growers, along with the rest of the agriculture industry, have been proactively engaging in conservation practices, such as no till, and reduced tillage, which result in a net benefit of carbon stored in the soil. In fact, on my own farm, I do both no till and reduced till. For the past five years, I've worked with my

State Association, the Ohio Corn Growers, on a research project with Dr. Rattan Lal, from the Ohio State University, on soil carbon sequestration research. As part of our research, we have on-farm plots at six different locations to study various soils, and their carbon capture capabilities. I've been actively engaged from the beginning in defining the research protocols. This is just one example of the proactive steps our industry has taken.

NCGA has identified several priorities, which I believe are critical elements to the agricultural sector within the cap and trade legislation. First, NCGA feels the agricultural sector should not be subject to an emissions cap. Any efforts to regulate greenhouse gas emissions from America's two million farms and ranches would be costly, and burdensome. The agricultural industry accounts for a very small percentage of emissions in the overall economy. Only 7 percent of all greenhouse gas emissions. Therefore, it would be unreasonable to concentrate on regulations for such a small and diffuse industry.

Furthermore, an important component of creating such a successful cap and trade system is insuring that domestic offsets are not artificially limited. Artificial caps will prevent legitimate carbon sequestration, livestock methane capture, and manure gasification projects from occurring.

Another top priority for our industry is the role of USDA. NCGA feels that USDA should play a prominent role in developing the standards, and administering the program for agricultural offsets. The Department has institutional resources, and technical expertise necessary to oversee programs that have the potential to be massive in scope. USDA has a proven record of program implementation, and collaboration with farmers.

One other issues that continues to be of the utmost importance to NCGA is the treatment of early actors. Agriculture is constantly evolving. As technologies and practices improve, farmers will continue to adopt new and efficient practices. However, producers that have taken these steps already should not be placed at a competitive disadvantage by being excluded from compensation for future offsets that occur as a result of these ongoing efforts.

In conclusion, it's our hope that we can continue to work with Congressional leaders to insure Congress—that they choose the best path for agriculture and America. Finally, 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 I very much look forward to your questions. Thank you.

[The statement of Mr. Yoder is included in the appendix at page XX.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Yoder. Our next witness, Mr. Robert McNamara. He's the President of F.J.A. Christiansen Roofing Corporation in Milwaukee, Wisconsin. His company was founded in 1879, and is one of the largest, most respected roofing contractors in the Midwest.

Mr. McNamara is testifying on behalf of the NRCA, which was founded in 1886, to represent all segments of the roofing industry. Welcome, sir.

STATEMENT OF ROBERT McNAMARA

Mr. MCNAMARA. Thank you, Madam Chairwoman, and members of the Committee for the opportunity to testify today on behalf of the National Roofing Contractors Association. I am Rob McNamara, President of F.J.A. Christiansen Roofing, a Tecta America Company in Milwaukee, Wisconsin, and incoming President for our Association.

The roofing industry is uniquely positioned to play an important role in developing innovative solutions to climate change issues now being addressed by Congress. These opportunities include (1) increased energy efficiency, including vegetative and reflective, or cool roofs, in appropriate climates, as well as daylighting through rooftops to reduce interior electric lighting requirements; and, second, production of renewable energy from rooftops via solar electric, solar thermal, and wind energy generation.

First, regarding increased energy efficiency, residential and commercial buildings in the U.S. account for about 30-40 percent of the carbon emissions generated by our nation. Providing incentives for building owners to adopt more energy efficient roofing systems will provide numerous benefits to the public. Current trends toward the adoption of green buildings are key drivers of economic growth in our industry. NRCA and its members are working to maximize the environmental, energy conservation, and economic benefits of expanding green buildings through a variety of energy efficient roof technologies that can help reduce carbon emissions, and provide other environmental benefits.

Second, we continue to see the increased use of rooftop technologies to increase energy production from sustainable sources. These include photovoltaic roof systems that generate electricity from solar power, solar thermal rooftop installations to reduce energy requirements for heated water, and roof-mounted wind turbines for power generation. Roof surfaces across the nation offer an economical and ready-to-use platform for the production of renewable energy. If only one-third of the roof area of current U.S. residential and commercial buildings was used for solar energy production, our rooftops could generate over 50,000 megawatts of power annually, or about 8 percent of our current electricity generating capacity. And these numbers will only increase with expected advances in PV technology, and the resulting efficiencies in the coming years.

As Congress considers legislation to address climate change issues, NRCA urges members to adopt market-based solutions wherever possible to achieve public policy goals.

We are pleased that the discussion draft proposed by Representatives Waxman and Markey recognizes the positive role that energy efficient roof systems can play. For instance, this proposal would accelerate the adoption of so-called cool roofs that reduce carbon emissions by achieving higher levels of solar reflectance. NRCA shares the proposal's objective to accelerate the use of energy efficient roofs, and we look forward to working with Congress to insure that roof standards reflect the reality of differing climatic and geographic zones.

NRCA also shares the goal of achieving accelerating energy efficiency by setting new standards for building codes. However, we

urge Congress to work with the existing code bodies, the construction industry, and other stakeholders to maximize attainment of energy efficient goals that are effective, practical, and achievable.

NRCA also urges Congress to consider providing tax incentives for building owners who install energy efficient roof systems that go beyond the requirements of existing building codes.

While our industry can play a productive role in addressing climate change issues, NRCA does have concerns about the potential impact of a cap and trade system for combating climate change. Given that a large percentage of roofing products contain asphalt-based materials, the cap and trade program could adversely effect the price sensitive roofing industry by raising input prices.

NRCA urges Congress to remember that higher costs will inevitably be passed on to consumers, and this could inhibit the growth of our industry, and the adoption of energy efficient roofing.

NRCA also has concerns over the Environmental Protection Agency's proposed endangerment finding which would result in greenhouse gases being regulated under the Clean Air Act. Many of NRCA's members have already had untold number of projects cancelled, or put on hold indefinitely, due to the downturn in our economy. The advent of additional regulation and permitting could bring our present level of activity to a virtual standstill.

Finally, NCRA believes that Congress should remove an obstacle in current law affecting the expansion of energy efficient roofing by passing the Green Roofing Energy Efficiency Tax Act. In lieu of the current 39-year depreciation schedule that is well beyond the average life of a roof system, GREETA would provide a more realistic 20-year tax depreciation schedule for commercial roof systems that meet a benchmark energy efficiency standard. By accelerating demand for green roof systems, GREETA will reduce carbon emissions by 20 million pounds per year, and would benefit millions of small business owners.

NRCA wishes to thank you, Madam Chairwoman, and also Congressman Moore for co-sponsoring GREETA.

To conclude, NRCA believes that recent advances in energy-efficient and energy-producing roof systems will provide unique opportunities for our industry to play a significant role in addressing climate change issues, and we thank you for this opportunity to testify today.

[Mr. McNamara's prepared statement is included in the appendix at page XX.]

Chairwoman VELÁZQUEZ. Thank you, Mr. McNamara. We have three votes, but we will have time for Mr. Johnson to make your testimony. So, let me just introduce you formally.

Mr. Johnson is a third-generation family farmer from Turtle Lake, North Dakota. He is also President of the National Farmers Union. NFU was founded in 1902 to help the family farmers address profitability issues and monopolistic practices, and today has a membership of 250,000 farm and ranch families. Welcome.

STATEMENT OF ROGER JOHNSON

Mr. JOHNSON. Thank you, Madam Chairwoman, and Ranking Member Graves. We are pleased to have this chance to testify on

behalf of the agricultural community, and specifically on behalf of our 250,000 members.

National Farmers Union emerged as a leading voice for how agriculture can play a significant role in dealing with climate change a few years ago. Our policy adopted by all of our members supports a national mandatory carbon emission cap and trade system. We've seen the impacts of some of the climate change—some of the climate change impacts over the years on our industry, and we think it is time that Congress dealt with this issue.

We also think that it is, as you indicated, not a matter of if, but a matter of how and when that this issue gets addressed. We think it makes sense for us to use a cap and trade system. It is what much of the rest of the world seems to be doing. It provides flexibility that would be important for us. And, hopefully, it will provide an opportunity for our farmers and ranchers to participate in a meaningful way.

Climate change legislation, if it is not passed, likely will result in EPA regulating. That is not something that our members would look forward to being subjected to, so we support a comprehensive legislative approach to addressing climate change.

Agriculture's role, we believe that, as you heard in earlier testimony, we contribute less than about 7 percent of U.S. emissions in agriculture, but we have the potential to offset up to 20, to maybe 25 percent of all U.S. greenhouse gas emissions, and so we stand ready to play a role in that.

The income potential from using offsets will be significant. Our members understand that whatever climate change legislation is ultimately implemented, it is going to result in increased costs for fuel, and fertilizer, and other inputs. We also want to have an opportunity to participate on the income side by the use of agricultural offsets.

The distribution of allowances is particularly important, and we think that we have some suggestions in the testimony on how those allowances can be distributed back to the sector to help mitigate some of those cost increases that I referenced just a bit ago. Providing a percentage of those overall allowances back to us would be very beneficial.

The National Farmers Union currently is a member of the Chicago Climate Exchange that you referenced in your opening comments. It is the CCX, the world's first greenhouse gas emission registry. It's operated voluntarily, but members of the CCX make legally binding, voluntary commitments to reduce greenhouse gas emissions.

Our organization is currently the largest aggregator of agricultural credits for the CCX. We have about five million acres enrolled across 31 states in this country, nearly $9.5 million has been earned by about 4,000 of our members across the country.

We also believe that there needs to be a significant role for USDA in running the offset program. As you heard earlier, USDA has a lot of the technical expertise, over 20 years of targeted climate change research has been done as USDA. We think they are well positioned to work with our farmers, both in terms of providing technical assistance, and also having access to facilities. They basically have offices in virtually every county across the

country, and so farmers and ranchers are used to dealing with them.

We also believe that domestic offsets should be unlimited. There are a couple of reasons for that. Certainly, the potential to sequester up to 20 percent of greenhouse gas emissions is something we don't want to overlook. Using offsets provides a mechanism for doing that. An arbitrary limit on offsets would work against sort of the idea of trying to keep this thing under some sort of cost control. The larger the market is, the more likely it is that the overall cost of the system will be reduced, and so offering unlimited offsets would help in that fashion, as well.

We have a number of other concerns. Just quickly, three topics; additionality. We think that what you need to do in Congress is to establish a static baseline of activities. We want to make sure that we don't punish early actors. In fact, they ought to be rewarded. There are systems that deal with reversals, which is an issue that some on the other side of this issue have sometimes raised from the environmental standpoint. And we also support stackable credits. Just because a farmer implements a practice that it's good for the environment with respect to soil erosion, should not mean that that person shouldn't be able to take advantage of an economic opportunity to also reduce greenhouse gas emissions.

With that, Madam Chair, I would be pleased to respond to any questions, when that time comes.

[Mr. Johnson's prepared statement is included in the appendix at page XX.]

Chairwoman VELÁZQUEZ. Thank you, Mr. Johnson. And the Committee now stands in recess until we come back from voting. Thank you.

[Recess.]

Chairwoman VELÁZQUEZ. The Committee is called back to order.

Our next witness is Mr. Gordon Sharp. Mr. Gordon is the founder and Chairman for Aircuity in Newton, Massachusetts. Mr. Sharp is also the founder and former CEO of Phoenix Controls, and has more than 25 U.S. patents to his name. Aircuity's products reduce building energy and operating expenses while simultaneously improving its indoor environmental quality. Welcome, sir.

STATEMENT OF GORDON SHARP

Mr. SHARP. Chairwoman Velázquez, thank you for the opportunity to speak before you today on how small business can, and is addressing climate change. My name is Gordon Sharp, and I am the Chairman and founder of Aircuity. I have started, and successfully grown several small businesses built around technology innovation for energy efficiency.

Aircuity is an example of the impact of small business innovation on addressing climate change. Aircuity has commercialized technology to optimize ventilation for commercial and institutional buildings without sacrificing comfort, safety, or occupant productivity.

Since most buildings are actually over-ventilated, properly controlling outside air in building ventilation is the single largest factor affecting both building mechanical system-related energy-efficiency, and indoor environmental performance.

Aircuity's innovation was to develop an improved means for measuring the indoor environment that enables a reliable demand-based ventilation approach. Borrowing from the data networks world, we architected a multiplexed sensing system that routes air packets from throughout the building to a centralized set of high grade sensors. The result was a cost-effective, accurate, low-maintenance solution that addresses the deficiencies of conventional approaches. For example, this hearing room is a good candidate for our technology, since much of the time this space is not fully occupied, requiring less outside air. However, like most buildings, it is probably always ventilated at the same high rate, wasting significant amounts of energy on cooling, heating, and fan power.

In terms of the climate change impact, Aircuity's forecast for 2009 should represent more than $7.5 million in annual energy savings, or an annual reduction of 38,700 metric tons of carbon dioxide, or equivalently, 85 million pounds of CO2. This is the climate change impact of 30.5 megawatts, or about $225 million of installed solar PV capacity, which is about 7.5 percent of the total capacity that was brought on last year.

Whereas, Aircuity represents a younger small business in a rapid growth stage, Phoenix Controls, another small business that I founded, that was later sold to Honeywell, is a more mature business in the field of energy savings, airflow controls for laboratories. The climate change impact of their sales last year was roughly equal to the total new U.S. solar PV capacity installed last year. In fact, Phoenix Controls' current installed base of systems is reducing energy consumption by about $1.1 billion annually, representing a carbon footprint reduction of 5.6 million metric tons of CO2, or the energy equivalent of 1-1/4 days of imported foreign oil.

Regarding the financial practicality of these energy efficiency solutions, cost is often raised as an obstacle. Whereas, in reality, they are solid financial investments. For example, Aircuity systems usually deliver paybacks from one to four years, which represents internal rates of return from 100 percent to about 20 percent. A larger obstacle is actually owner concerns that the projected savings are not achievable, or that the technology is too new, and from a lesser known small business.

This credibility gap can be difficult to cross until there is a critical mass of proven installations. As I have personally experienced, pioneers are the ones with the arrows in their backs. One means to help bridge this gap is to introduce incentives from both utilities and the government to reduce the financial barriers for early adopting organizations that have effectively been increased by these concerns. Additionally, carbon credits may represent another helpful financial boost. Over time, this assistance becomes less important as the technology's true financial returns become known.

Due to the current high cost of renewable energy, the interest in using energy efficiency to address climate change has increased dramatically. In fact, our business has nearly tripled in the last six months. On a broader front, in the last four years, the value of green building construction has gone from about 2 percent, to a level approaching almost 10 percent of new construction starts. In the next four years, the green building market, even with the cur-

rent economic downturn, is projected to reach between 96 and 140 billion dollars annually, versus 36-49 billion dollars today.

There has never been a more important time for small businesses to pursue innovation for energy efficiency and sustainable climate change. Aircuity is proud to be one of many small businesses doing its part to achieve these ends.

I want to thank the Committee for the opportunity to appear here today, and I will be happy to answer any questions that you might have.

[Mr. Sharp's prepared statement is included in the appendix at page XX.]

Ms. DAHLKEMPER. Thank you, Mr. Sharp. I'd like to recognize the Ranking Member, Mr. Graves, to introduce our next witness.

Mr. GRAVES. Thank you, Madam Chair. Our next witness is Lawrence Kavanagh, who's the Vice President for Environment and Technology with the American Iron and Steel Institute. Your members, I believe, make up 75 percent of the steel production in the United States, and look forward to hearing your testimony. Thanks for coming today.

STATEMENT OF LAWRENCE KAVANAGH

Mr. KAVANAGH. Thank you. It's my pleasure to be here.

AISI does, in fact, represent three-quarters of the steel made in the U.S., and in addition to companies that produce steel, some of which are small businesses, we have over 130 suppliers to our industry that are members. And that is a group that has many small businesses as part of it, technology suppliers, raw material suppliers, machine shops, et cetera. We depend on them, and they depend on us.

I would like to start with the steel industry's most important issue regarding climate change policy, and that's competitiveness. The steel industry in our country is the lowest CO2 emitter amongst steel companies around the world. For that reason, it's good for the environment to make steel in the United States. We've reduced our energy use per ton of steel by a third since 1990. And as a result of this achievement, and this is a key point, the processes we operate today are pushing their energy limits as defined by the laws of physics.

What this means is that the basic premise of climate policy, make energy more costly, and people will use less, doesn't work for steel, because we're already using less. We're already at the point with today's processes, which is little as possible. So, when you combine that fact with the fact that steel markets are global, and we compete with steel from countries that are not subject to the same, or will not be subject to the same climate policies, you realize we can't pass those additional costs across.

On the positive side, our new green economy is going to require a major infrastructure investment. That's a great opportunity for steelmakers here, and for small businesses; things like transmission towers, wind towers, pipelines, solar panels are all steel-intensive. Steel, we believe, for these products, should be made here, which, as I already said, is the best and cleanest place to make steel in the world.

Our ability to stay competitive in a global market means we need fair and strong trade laws that are rigorously enforced. That's the same principle that's true for climate. We need fair climate laws with global reach that could be enforced. Any legislation that would otherwise undermine the competitiveness of U.S. producers would force steel production to other countries, with lower environmental standards, and, consequently, lower costs. Such an event would have the perverse outcome of actually increasing global greenhouse gases.

To prevent something like that from happening, there are three fundamental components that we believe are part of good climate policy. One has to do with the stability of emission allowances. As I've mentioned already, the steel industry is very near the energy intensity limits that it can achieve, as dictated by the laws of thermodynamics.

Now, we are researching, and have been for the last five to eight years, new ways to make steel that don't emit C02. This is an activity that we think, if successful, will be complete about the middle of the decade of the 20s. This is also, I should point out, a great opportunity for small businesses in the research community, a lot of innovation, a lot of new technology comes through collaborative R&D that we do with universities, and private investors. But it means that until that technology is ready, the pool of allowances needs to be sufficient for steel, and needs to be stable.

Second would be the cost of energy. Climate policy is going to increase the cost of energy. The steel industry uses coal, electricity, and natural gas in large quantities. At least no one that we've talked to can estimate how much these costs are going to go up, but the fact is, they are going to go up, and as a result of climate policy, to a degree not experienced by our international competitors, so there needs to be a means to deal with that. The present bill falls short in this area, and when you consider that energy costs are 20 percent of the cost of steelmaking, you can understand that a large increase there goes right at the competitiveness issue.

And, thirdly, an effective border adjustment measure would account for the difference in the burden of strict carbon policy here, versus other places around the world. And these points are elaborated on in the written testimony.

In summary, we would urge the House not to consider a one-size-fits-all solution. Strong and competitive steel companies provide a lot of well-paying jobs for their employees and their suppliers' employees. We need to keep making steel here in the U.S., and we've worked for a long time, the last 20 years, the men and women in our industry, to get to this point of climate leadership, and we'd like to keep it. Thank you.

[Mr. Kavanagh's prepared statement is included in the appendix at page XX.]

Ms. DAHLKEMPER. Thank you very much, Mr. Kavanagh. Coming from Western Pennsylvania, my District, we've got a lot of steel in that area, and certainly appreciate your input into this discussion going forward.

I just have a couple of questions here. Mr. Johnson, I also come from very much of an agriculture district, too. And farmers have often been the leaders in conservation efforts. And many times,

without public policies driving these practices. As part of a potential cap and trade scheme, I know that the NFU supports rewarding farmers who have already employed such operations. How would you respond to critics that believe giving carbon credits to so-called early actors defeats the goal of reducing the overall emissions?.

Mr. JOHNSON. Well, thank you, Madam Chair. There are several responses to that. First of all, the broader that you can make the offset market, the more efficient economically your climate change legislation is going to become. Secondly, it is the early actors who really led us— who brought us to this dance, if you will. They showed us the ways to try and figure out how to have a reduced carbon footprint.

Those are the last people that you want to penalize. They are the first ones that ought to be rewarded. They took a lot of risks on the front-end of this thing in order to go to these new—adopt new technologies, and new practices that have proven to be beneficial for climate change kinds of issues. So, we want to be sure that we don't, in any way, penalize them. So, there needs to be a mechanism to make sure that that happens.

Ms. DAHLKEMPER. Any thoughts on that mechanism?.

Mr. JOHNSON. Well, yes. I mean, one of the mechanism— first of all, the thing that I described in my testimony is that you need to pick a baseline, a static sort of—a time, a period in time in which okay, practices that are performing after that time, you allow offsets, allow them to participate in the offset market. If they're before that time, you have to disallow them. But, if they're early actors before that time line, that is really the rationale for carving out a portion of the allowances that would likely be sold in the market, and allocating them back to the sector, so that those revenues could be used to compensate those early actors in a fashion similarly to the folks that acted later.

Ms. DAHLKEMPER. Okay. Thank you, Mr. Johnson.

Mr. JOHNSON. You're welcome.

Ms. DAHLKEMPER. Mr. McNamara, the green roofing products and services can provide small roofing firms with a way to diversify their business model. Beyond new roofs, have you found retrofitting or replacing less efficient energy products to be an increasingly important part of your business? And what has been the drive or demand for such services, if that's so?

Mr. MCNAMARA. Yes, that has certainly been the case. We've seen, certainly, over the last five or ten year period, and with everybody with increased energy costs, obviously, as well, continue to move towards greater levels of insulation on either projects that we specify and install ourselves, or projects that we're involved with that are being specified by others. We see greater and greater levels of insulation that are provided on rooftops, and that, along with other energy-efficiency measures, such as I referred to before in terms of daylighting, which works with bringing in sunlight to reduce the energy requirements for electric lighting, and cool roofs, or reflective roof surfaces, as well, have become more and more popular.

Ms. DAHLKEMPER. Okay. Thank you.

Now, Mr. Sharp, given the recent volatility in energy, many large entities have taken steps to reduce their energy consumption; ultimately, the greenhouse gas emissions. However, for many small firms, these investments remain out of reach. Can you talk about the type of clients that purchase your technologies?

Mr. SHARP. Well, one of the clients—we tend to work with larger facilities. I'm sorry. We tend to work with larger facilities, which tend to be sort of universities, colleges, as well as corporations, and things of that nature. But we do get down into small businesses, as well, who have larger facilities. And, to that extent, the paybacks involved with this type of technology are relevant to them, as well, so that is a very appropriate use of funds. In reality, it becomes a major financial investment that pays off at excellent rate, so it's a good investment for them. So, it's really not out of reach of them, it really is able to be achieved. And it may require some financing, but they're easy to finance, based on the paybacks.

Ms. DAHLKEMPER. So, obviously, as the prices come down, more and more small firms are going to-

Mr. SHARP. Yes. I think a lot of the technology is within reach now. I mean, a lot of the—I mean, obviously, there's a range of different investments people can make, and different types of energy solutions. But there's a lot of very low-cost, or no-cost things that people can do, as well as things that have excellent paybacks in a one to five year period, which is, obviously, good business to invest in.

Ms. DAHLKEMPER. And, Mr. Kavanagh, could you just expand a little bit on the R&D opportunities out there for small businesses, as you were talking about the CO2 emissions?

Mr. KAVANAGH. Sure.

Ms. DAHLKEMPER. And what you see happening right now, and where you see that can go?

Mr. KAVANAGH. Okay. Thank you.

Right now, we're engaged in research projects to develop ways of making steel that don't emit CO2, and that means replacing carbon as a fuel. So, that means using green electricity, using hydrogen, alternatives like that. So, that research now is going on at Massachusetts Institute of Technology, and University of Utah. And around such technology centers of those two universities are small, independent, but really excellent technology companies that we pull in to solve the technical problems as the research advances. And then what happens is, as the market for these technologies grow, and they become closer to commercial use, and then in commercial use, those companies that have helped in the development, they also grow, and they provide jobs, and the technology becomes pervasive regionally, and then nationally. So, that's how the research infrastructure in our industry, and many others, works, and how it supports new small business.

Obviously, the steel industry, as it exists now, has a very robust small business infrastructure that as long as we're healthy, they're healthy, so it works on two levels.

Ms. DAHLKEMPER. Okay. Thank you very much.

Mr. KAVANAGH. You're welcome.

Ms. DAHLKEMPER. I yield to Mr. Graves.

Mr. GRAVES. Thank you.

Mr. Johnson, you said that you all support the cap and trade legislation, and Congress doing something, rather than the EPA doing something. Right now, on the cap and trade proposal, there is no credits for agriculture. In fact, it's left up to the EPA to do it. How do you plan on addressing that?

Mr. JOHNSON. Well, thank you very much for the question. We hope that you all might figure out a way to address that in the legislation. Very seriously, many of us in the ag community-I understand that the plan here is that the various committees have jurisdiction, will take up different parts of this bill. And our hope is that especially members of the Agriculture Committee will soon convene and make their recommendations to do the kinds of things that I asked for in my testimony, I think that others have asked for, as well.

We don't really have an issue with EPA sort of having oversight over the cap and trade system, if you will. But we believe very strongly that USDA, the law needs to require that USDA is the one who writes the standards for offsets, who establishes the criteria for which they will be granted, provides the technical assistance to farmers, all those sorts of things.

I think if Congress were to pass something that had EPA doing all of that relative to offsets for agriculture, a lot of our members would be, frightened might be a little too strong, but they'd be very, very concerned. They'd much prefer to work with USDA. That's where the expertise is, as well.

Mr. GRAVES. Question for you, and for Mr. Yoder. I'll start with Mr. Yoder.

If cap and trade moves more towards cleaner fuels, and that's kind of—that's pushing us in a big way towards natural gas, getting our electricity from natural gas, and some estimates, we're seeing at least in Missouri, that energy prices could go up, or prices for that energy could go up as much as 30 percent. Well, have you guys thought about, your organizations thought about what that's going to do to our fertilizer prices? I mean, you've got to have anhydrous ammonia before you can produce any other fertilizer, and the majority of our nitrogen sources are coming from anhydrous. And if those prices—I don't know if we can stand as an industry another 30 percent increase, particularly in industry that is a price-taker on both ends, or price-taker for all of our inputs, and price-taker for all of our output. We have no control over either side.

Mr. YODER. There's no question that our inputs will go up, especially fertilizer. In agriculture, we're very energy-intensive, just like the steel industry. Virtually everything we do has got to do with energy, again, whether it's natural gas, or whether it's fertilizer from—well, that is natural gas, as well as other things that emit greenhouse gas, like potassium and phosphorous.

That's really why, as we look at this whole thing, our costs are going to go up, even if agriculture would remain an uncapped entity, we will be profoundly impacted by everyone else's carbon footprint, and our costs will go up dramatically. That's really why it's important, we think, you put a good solid, viable cap and trade system in place, so we can recover some of those costs. And that we can go ahead and deliver the best value for food, and feed, and fuel

in this country, in the world, for that matter. But that's really what we're looking for as an offset to combat some of those extra costs.

At the same time, as we do this, I just would like to add this, we have to make sure that this is a simplistic enough approach that we can have a way that's easily verified.

One of the things that I have in my written testimony is the fact that we've been doing some international work. Like I said, I was in Bosnia, Poland last year, and talked to a lot of people about agriculture's role, and they have lots of questions, and I'm actually going on an exchange with a group, the Environmental Defense Fund, in July. And we're going to involve other international countries, as far as this whole cap and trade.

Just like Mr. Kavanagh mentioned, it doesn't do us any good to have a very expensive, and complicated cap and trade system here, if the rest of the world is not going to be on the same page. So, it's important that, as you think about developing a cap and trade system, or whatever direction that Congress chooses to go, that it reflects what's workable in the entire globe. And I think that's why it's important for us to just keep things on a simplistic basis, make sure it's real, make sure it's verifiable, but keep the credits fungible, or interchangeable, whether it's a credit created here in the United States, or created in China, or wherever. But they need to be the same, but that's really getting back to the original point. We have to make sure that we have a mechanism that we can recover some of that additional cost, so we don't have to pass that on to the consumer for food.

Mr. GRAVES. Mr. Johnson.

Mr. JOHNSON. I would agree very much with what was just said. We believe that it's just a matter of time before this country does something relative to climate change. Much of the rest of the world is there. If we do nothing, if Congress does nothing on this issue, we now have a Supreme Court ruling directing EPA, not saying they can, but directing them to do something. That strikes us as being a far worse alternative than sitting down around the table and figuring out okay, if we're going to do something on this, how should we do it, how should we make it best benefit agriculture, while we know costs are going up?

There is really no question that we're going to see fuel prices increase, our fertilizer prices, in particular, are likely to go up, as you indicated. Those costs are going to go up. If we can get agriculture at the table, and get the Ag Committee to weigh-in very quickly with the kinds of recommendations that we're making, it provides us an opportunity to not only do the right thing here in this industry, but also to recoup a significant number of those cost increases. How much? I don't know that anybody can answer that, but, clearly, we're going to be better off if we do something, as opposed to letting EPA regulate it. That's our view, anyway.

Mr. GRAVES. Real quick, Mr. McNamara. You mentioned that with the increased cost of materials, that it's going to have an impact on your industry, and with cap and trade. Just out of curiosity, most of our roofing materials right now are asphalt-based. I mean, what is that going to do to homeowners or consumers out there, and all those roofs, millions, and millions, and millions of roofs out there that have to be taken care of?

Mr. MCNAMARA. A lot of shingles out there, and rooftops, for sure can be impacted. There are three areas that come to mind, in terms of input cost that would be affected in our industry. Number one certainly are the asphalt products that relate to shingles on steep roofs, which are covering the country, as you mentioned. Millions of rooftops with that, steep roofs, and then also even on low-slope or flat roofs, we have asphalt-based products that are still a very major portion of systems that are put in place yet today. Asphalt, liquid asphalt and then also rolled goods that are roofing products with that.

Another area is insulation for our industry that is produced through the use of quite a bit of energy, either through the drying or blowing agents required to produce the rigid board insulation, foam board, and other types of rigid insulation.

And then the third area that comes to mind for us in terms of energy cost, and input costs for us, are simply the fuel costs that we also incur, as was mentioned, for both the fleets that we operate, our trucks, our cranes that we operate, and then the rooftop equipment that to use. It's very backbreaking work, so usage of rooftop equipment is critical in our industry.

Mr. GRAVES. Thanks.

Chairwoman VELÁZQUEZ. Mr. Bright.

Mr. BRIGHT. Madam Chairman, thank you very much. And, panelists, thank you for your time in discussing an issue of great significance to the small businesses throughout our communities out here. And, as all of you know, over 70 percent of the jobs in this country are provided by small business. And it's important that as Congress considers climate change legislation, the interests of small businesses, and family farms throughout the country are protected. As we move forward on climate change, we must tread carefully, striving for a bipartisan consensus, with a full understanding of the consequences of both inaction, and action.

And with that, Mr. Kavanagh, determining which entities will be regulated under a cap and trade system is a key issue for the small businesses out there in the business community. Considering many small businesses are considered low emitters, would it be your opinion that only the larger, or largest emitters be regulated?

Mr. KAVANAGH. Well, certainly, that's the place to start, sir. And I don't know if I can comment, not being an owner of a small business, if I could comment on how they should be regulated. But, certainly, I think I've pointed out that there are strong relationships between large and small emitters within the economy. And on hearing the previous statements from the gentlemen to my left, I think they've made the point that it's still not a one-size-fits-all package, and that some common sense, and customization would need to occur.

Mr. BRIGHT. How do we determine the proper threshold at which greenhouse gases should be regulated, in your opinion? And where should that threshold be, or do you have an opinion today?

Mr. KAVANAGH. I don't have an opinion on whether the threshold that's established, which is 25,000, is too high, or too low. It seems to be, from the coalitions that we're part of in the industrial sector, that it's not unreasonable.

Mr. BRIGHT. Good. Any other panelists want to kick in your opinion on that?

Mr. JOHNSON. The only thing I might add is that, and it kind of gets back to the issue of if nothing happens here, what will EPA do under the Clean Air Act. I was a meeting earlier this morning where a former EPA employee said that under the Clean Air Act, their target for regulating emitters begins at 25 tons, not 25,000 tons, but 25 tons. That's way too low. I mean, that would have an enormous deleterious impact across our whole industry, and so we're certainly—it kind of gets back to the point that we think it makes a whole lot more sense to cap the large emitters, and then to allow these market forces that we've been talking about through offsets and things like that, to help provide incentives to get the kind of reductions from other sectors of the economy, such as agriculture.

Mr. BRIGHT. Okay. Thank you.

Mr. Yoder, as a farmer, in your opinion, what role could the U.S. Agriculture sector play in helping to reduce greenhouse gases through offsets, if any?

Mr. YODER. Well, one of the things that we can do, is we can devise a system, a protocol that can create these incentives for farmers to go ahead and sequester carbon. And that's the thing that I would encourage us all to think about, and not just think in a very narrow pattern, that there's lots of things out there that we can possibly do in the future that we haven't even thought about today. So, one of the things that originally we're thinking of is sequestering carbon in soil by conservation tillage, as we go through, and we can improve it with, as I said in my earlier testimony, with some real scientific evaluation, and what's possible.

What the USDA can do, though, is, I think, as EPA sets our parameters of what needs to be done, and what is a real and verifiable credit, USDA, I think their role would be to design a protocol that they could put in place, that they could go ahead and implement, give to the farmers, because we have contact with them all the time, anyway. And then they could be part of the verification system, and it could be very, very low cost.

The biggest thing that we have to do in all this, is regardless of where that threshold is that you were talking about before is, if we limit the amount of credits that can be created out there, as we know we can—agriculture alone can come up—can mitigate up to 20 percent of the total greenhouse gases, let's take the lid off, and let's create those low cost ones, so it'll cost everyone less to participate.

Mr. BRIGHT. How do we insure that for farmers, the value of any cap and trade legislation exceeds the cost?

Mr. YODER. Well, that's a big thing. Obviously, if it costs more to implement than you get back out of it, then it's not going to be a win for anyone. That's why it's really important to have—instead of basing it on the project, base it on protocols, and things like that, that are scientifically proven. It greatly inhibits the cost overruns, and makes it more efficient. So, yes, if we can't get as much as what it costs to do, then nobody wins.

Mr. BRIGHT. Okay. Thank you very much. Madam Chairman, I believe my time has elapsed.

Chairwoman VELÁZQUEZ. Yes. Mr. Luetkemeyer.

Mr. LEUTKEMEYER. Thank you, Madam Chairwoman.

The title of today's hearing is, "Climate Change Solutions for Small Business and Family Farmers". And from that, you would infer that a solution would be something that we would look for, if we had a problem. And my concern is that, at this point, I don't know that we have a problem based on sound science. And it's difficult for me to look for solutions whenever we're grasping to find a problem. And it's a little frustrating to-I know you gentlemen are all doing a good job here of trying to work within a system that's being proposed, and it's a little difficult for me to frame questions whenever I have a concern about the basic premise of what we're doing here.

So, with that being said, my concern is, I've talked to a lot of my energy-producing folks in my own district, or in my state. I've got three major public utilities that produce most of the electricity in our state, and a number of rural co-ops I've talked to. And those folks say that we're going to raise our costs from 40 to 125, 150 percent for the cost of electricity in our state, which is 80-85 percent produced by coal. So, in that situation with us, it looks like the impact is going to be pretty significant.

Mr. Kavanagh, you indicated that 20 percent of the production of iron or steel is energy, so we're looking at 20 percent increase in the price of your product. Is that correct?

Mr. KAVANAGH. Yes, if energy costs doubled-

Mr. LEUTKEMEYER. Is 100 percent.

Mr. KAVANAGH. Yes, that's right. That would be a 20 percent increase.

Mr. LEUTKEMEYER. How devastating would that be to your industry?

Mr. KAVANAGH. Well, it would be a tremendous impact, because, if you say that right now a ton of steel costs $500, let's say. So, that means it's going to cost $600, and you have steel coming in from other parts of the world that is still going to cost $500, so you're at $100 per ton, that's a huge disadvantage. And, obviously, it's more than could be absorbed and eaten to retain market share, and presence, and all of that. I mean, you would—the consequence for the steel industry of a case like that, our only response to using less energy is to shut production off. So, we would shutdown the hot end, the melting ends of our plants, and that's where all the emissions come from, most of the energy is used. But it's also where most of the jobs are. And because steel demand is still going to increase, because all of the change in our economy is steel-intensive to support climate policy, the steel is going to come from somewhere else. Okay? So that steel is going to get made, and it's going to get made in a place that's more damaging to the environment than making it here.

Mr. LEUTKEMEYER. So, what you're saying is that if this goes in place, and we anticipate that the costs as what they've been projected out to be, it will probably decimate the steel industry in this country. Is that what you just said?

Mr. KAVANAGH. Yes, it is. At that level, yes, it is.

Mr. LEUTKEMEYER. Mr. Johnson, Mr. Yoder, you'd like to apply the implications of how it's going to affect the total cost of production for farmers? Are we going to be able to survive?

Mr. JOHNSON. Well, of course we're going to survive. I mean, there is not much question, everybody I know eats, and that's what agriculture is mostly about, is producing food. So, we'll figure out a way to survive.

Mr. LEUTKEMEYER. I guess my question, let me reframe my question. I guess my question is, are we going to be able to produce food for ourselves, or are we going to have import it, because you no longer can compete on an international basis, because of the cost of production here in this country?

Mr. JOHNSON. Sure.

Mr. LEUTKEMEYER. Just as steel.

Mr. JOHNSON. Well, you know, as we indicated—as I indicated in my opening remarks, we think there's really not much question about what costs are going to go up for agriculture. Fuel costs are going to go up, energy costs are going to go up, fertilizer costs are going to go up.

The premise of your question seems to be that there's no reason for that to happen, because there's a disagreement among the scientific community. That's not really an area that I have expertise to talk about. But I will say that you've got the international scientific bodies that have come to the conclusion that climate change is a real thing, and it needs to be dealt with.

We have a U.S. Supreme Court ruling now that is directing EPA under the Clean Air Act to deal with it.

Mr. LEUTKEMEYER. Let me interrupt just one second. The crux of my question is this. Because of what's going on, what kind of impact are those rules going to have on you? Is it going to cause us to continue to not be able to expand, or be able to utilize our farming ground in this country? And, if so, how much of an impact is it going to have, because at the end of the day, in order for us to find a solution, if there is a problem, we've got to find a way to mitigate that impact.

Mr. JOHNSON. Yes. That is the principal reason that we are here suggesting the robust use of offsets in climate change, because as these costs increase relative to the policy choices that are made here, and in other places around the world, there needs to be an opportunity for farmers, and ranchers to recoup some of those costs. And the prescription that we've sort of—that I've outlined in my testimony is that we want agriculture to be able to use offsets as one of those methods for adding some income to the bottom line, instead of it just being a cost contributor. And we would argue very strongly that USDA has the expertise in that area, and that they should be weighing in on it.

Mr. LEUTKEMEYER. I'm over my time. Thank you, Madam Chair.

Chairwoman VELÁZQUEZ. Time has expired, but I will allow for the gentleman to respond.

Mr. YODER. Just quickly, I'd like to say, Congressman, that that's why it's so important to do this correctly. If it's done wrong, it could be horrible for agriculture. It could be detrimental, and put people out of business. So, that's why it's so important to have a real robust program for offsets, and plentiful offsets, so that, espe-

cially in this time—this country is really reeling from economic downturns. The last thing we want to do is thwart any kind of recovery with this new obligation to make changes. So, the least amount of pain that we can cause, and that would be with a robust cap and trade system, where plentiful offsets can be bought, so that that transition cannot thwart that movement of steel being bought away from this country, and so forth. So, it can be done terribly wrong, and have horrible consequences, or it can be done in a less impactive way, where we can all survive.

Mr. LEUTKEMEYER. Thank you.

Chairwoman VELÁZQUEZ. I just want to say that I have to leave the room to go and vote in my Financial Services Committee, but I really appreciate you coming here. This is a very important topic, and I just want to make sure that the voice of small businesses is represented, and that we get it right, because it's important. Especially now, given the fact of how our economy is doing. We need to get this economy growing again. And with this, it offers some opportunity to create new jobs.

So my question, Mr. McNamara, is, in your testimony, you highlighted how NRCA supports measures to promote cool roof, but express concern about insuring flexibility based on region. How can Congress promote the use of these roofs, while maintaining the flexibility the industry seeks?

Mr. MCNAMARA. Yes. Very simply, this is simply a matter between different climates in the U.S., areas such as my part of the country in Wisconsin, where we have winters which we're looking more for heat absorption from the outside than we are losing, trying to reflect or avoid heat during our cold winters, and so forth, and dealing with snow loads. And, so, really it's just a matter of being able to promote those. In the areas in the south, whether it's a city like Atlanta, or Florida, or what have you, and realizing those differences throughout the country.

Chairwoman VELÁZQUEZ. Good.

Mr. Yoder, NCGA has been engaged in developing guidelines for climate change legislation. And I understand your organization has worked with agricultural leaders on creating a framework to reduce emissions. Who are your industry partners, and what is the consensus you have been able to develop?

Mr. YODER. Well, actually, it's been difficult to get all commodity groups engaged in climate. Because, as some know, it's controversial of whether it's real or not, but the point, in fact, is it's here. There's enough scientific knowledge that we need to engage in this, and there's going to be some climate legislation. So, we have worked very closely with other organizations, like the Soybean Association, and the Wheat Growers Association, and National Farmers Union, and Farm Bureau, and while we all have maybe a different perspective, we all are at least engaging in trying to figure out what's best for our industry. So, yes, we've got some details to work out, but at least we're all finally talking.

Chairwoman VELÁZQUEZ. That's important.

Mr. Sharp, small firms attempting to develop energy-efficient technologies are confronted with two major challenges. The first is, developing the technology, and the second one is moving this product to the market. As you point out, small firms often struggle to

cross the chasm. How was your firm able to address this challenge? And, do you believe that there are ways to assist entrepreneurs overcome this obstacle?

Mr. SHARP. I think the simple answer would be persistence, and money, because it takes time to get through this, particularly with newer technologies that people aren't aware of. So, I think, looking at it from a policy standpoint, I think part of this is helping to create incentives. As I said, I think the—when people look at these new technologies, the concern is not that it's expensive, it's really more on the lines of—because the paybacks typically are quite good for a lot of the technologies that have been proposed. But what happens, is that the people in industry look at this, and they well, okay, it's supposed to be a three-year payback, but in reality, perhaps it's six, maybe it's nine. I really don't know. Do I believe what they say? So, the ability then is, if there are incentives, whether that's from utilities, or from the government, that then creates a situation where that nine-year payback that I think it might be, they can offset it down to maybe more like three years.

In time, obviously, as people then try the technologies, they realize gee, there really is a three-year payback. And, at that point, the incentives become less important, the economics fuel it. But, I think in that early stage, with new technologies, and maybe there's a—whether that's a time frame, or something, the ability to have some incentives around that is very important.

For us, it's been just persistence, pushing hard. I mean, it's taken a lot of cash, more than my investors ever expected. But, in the end, as I say, if people hear it for the sixth time, it suddenly becomes obvious. You've got to get through that period in that time, and other assistance in the form of incentives may be a way to help that.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Kavanagh, it has been stated that regulations reducing greenhouse gas could adversely impact our nation's manufacturing sector. And while recognizing these concerns, it also seems there is potential for business opportunities with the creation of new energy system, and a green grid. Do you believe that the domestic steel industry can play a role in greening our economy?

Mr. KAVANAGH. Absolutely. Not only from the side that the components of the green grid are very steel-intensive, and if you make them with the steel that has the lightest CO2 footprint, i.e., domestic steel, then that's a great contribution to greening of the grid. And then we get the benefit on the other side, also, is by using energy that's much more green. That lowers the carbon footprint of our industry, and flows all the way down through small businesses, as the gentlemen to my left have made that point many times. So, certainly, I think achieving a sound and functioning green grid, there's a major role for steel. Thank you.

Chairwoman VELÁZQUEZ. Okay.

Mr. McNamara, there are a number of policy tools to encourage the adoption of energy-efficient practices. What is the most effective way, in your opinion, to accelerate energy-efficient roofing, in order to reduce carbon emissions?

Mr. MCNAMARA. Well, the piece of legislation that we have being proposed, GREETA, the Green Roofing Energy Efficiency Tax Act,

I think is a wonderful measure to do that. It's a win for all. It, number one, for building owners brings down the depreciation term, like I had mentioned previously, from an unrealistic period of 39 years, down to a realistic period of 20 years. A study we had done at the time that we proposed this, done by Ducker Worldwide, an industrial research firm, found that average roof lives were really 17.5 years, so a 20-year period would seem to be very reasonable. And then we have the opportunity to marry that along with a increase in energy-efficiency, and making that a benchmark requirement in order to obtain, and be able to utilize the 20-year period. And so, as I mentioned, I think it would be a win for all parties.

Chairwoman VELÁZQUEZ. Okay. Mr. Johnson, the National Farmers Union instituted a carbon credit program in conjunction with the Chicago Climate Exchange. How many of your farmers are involved in this program? And, do you think this program can be a model for Congress in cap and trade legislation?

Mr. JOHNSON. We have about 4,000 members that are participating in the Chicago Climate Exchange Offset program right now. I do believe that can be a model that should be used. Our view is that the model that is most appropriate there is the marketplace part of that model.

One of the things that CCX had to do in order to create this market, have it function, was they also had to have put in place a scientific panel that would establish the protocols, and then they put another system in place to verify compliance, all those sorts of things. That's really not a role that the market, itself, should play. Those procedures should be done by USDA.

Chairwoman VELÁZQUEZ. Why is that?

Mr. JOHNSON. Because they don't have that expertise. I mean, they had to get it. I mean, the Chicago—the role that the CCX should play, should be a role of handling the money, being the market exchange, if you will, so that there are fair prices, so there's transparency, all those kinds of things. The scientific—there have been questions raised by some about whether they used the right science, all those sorts of things. The way you avoid those questions is, you have those decisions made by the scientists, as we would propose it, they should be at USDA. These are the real experts. They've done lots and lots of research. The research is peer reviewed. It's accepted widely, not only in this country, but in other countries, as well. So, it's kind of a long answer, but I think the model of the CCX is a very good model for trading offsets. It's a good, efficient mechanism, doesn't take a lot of resources to do it. It's very efficient, but it needs to be coupled with something that everyone can have a high degree of confidence in. And that, in our judgment, is the scientists at USDA.

Chairwoman VELÁZQUEZ. Thank you. Mr. Thompson.

Mr. THOMPSON. Madam Chairwoman, Ranking Member Graves, thank you for holding this thoughtful and timely hearing.

Now, I represent one of the most rural districts this side of the Mississippi, and the number one economic driver for the Commonwealth of Pennsylvania remains agriculture. And, as is for my district. From the northeastern dairy farmers, to timbering harvesting in the Allegheny National Forest, to mushrooms and tomato farms

in the southeast, the Commonwealth has over 63,000 farms, many of which are mom and pop operations, just like my history, my family of dairy farmers back a generation ago. As you can imagine, proposals increase taxes on small businesses, and any move towards a cap and trade policy, frankly, scares me, and puts my constituents, those small farmers who are back home, or the backbone of Pennsylvania's economic engine, in a very tough position, when we're looking at what looks like very unacceptable costs proposed for speculative benefits, just impacting the 4 percent of carbon dioxide emissions, or the scientific consensus is that humans contribute towards.

Evenly so, in Pennsylvania, the Pennsylvania Utility Commission, has removed decades of old rate caps that come off in 2010, and it will cause electric rates to increase 30-40 percent above the current price. Now, that paired with the federal increase brought on by—federal tax increase brought on by cap and trade, I'm afraid my constituents, farmers, manufacturers, families, are going to face unnecessary burdens, even more so during a time of economic downturn.

Now, we're hearing proposals to switch to cleaner burning natural gas as a fuel, and I support this move. However, at current prices, and limited production capacities, this seems haphazard, especially for the agriculture industry that depends on natural gas as a feedstock for fertilizer. Now, just last summer we witnessed some of the highest energy costs in memory. Energy prices that threatened to make America non-competitive in comparison to our neighbors globally.

Now, there are proposals on the table to open up areas, both onshore and off-shore, as a means to supply this much needed natural gas. And, in turn, prices would be reduced, and jobs would be created, and our nation could lower its dependence on foreign imports.

Because natural gas burns clean, there undoubtedly would be an increased demand if cap and trade, or a carbon tax should be instituted. And, so, relative to the gentleman representing the farming-related industries, I know Mr. Graves had gone down this road in terms of—I just wanted to affirm, in terms of the price of fertilizer, and the impact, I assume there's a consensus that as they agree that the price of fertilizer will go up as demand for natural gas goes up, could you briefly describe how fertilizer costs respond to the increase or decrease of natural gas prices?

Mr. YODER. Well, it's very much tied to that. I mean, as natural gas prices go up, we experience some of the highest nitrogen costs that we've ever had in the history of the United States. So, it's very, very susceptible to that. And that's why I still want to go back and say, we saw record amounts of fertilizer costs go up in the last two years. And they've been down some this past spring, but they're still at record amounts. And it's just run away, whether it was speculative, or whether it was real, but it hit the pocketbook here. And it scares all farmers about the viability, and that's why it's just adamant that we—if we're going to go down this road, that we're going to have to have some sort of mechanism to offset those additional costs, or we won't survive, absolutely. And I hear what you're saying, I know this is farms.

I'm an independent businessman, myself, and I paid—I used less fuel last year than I've ever used in history as far as gallonage, but I still paid way more than I ever did. So, all these things are going to have to be considered. That's why it's absolutely imperative that we be careful as we go through this. But, in my mind, a cap and trade program would be much less cost-prohibitive to our survival, versus a carbon tax. And, as I understand it, those are our two alternatives. And I just think that one offers an offsetability, and the other one is just flat, a higher cost of doing business.

Mr. THOMPSON. Mr. Johnson, any opinion?

Mr. JOHNSON. Well, yes, I agree with what was just said. I just happen to have come from a meeting earlier with someone from the Fertilizer Institute, and so I've got a chart in front of me that shows fertilizer prices, FOB Gulf Coast from December of '07 to the current time. About $350 a ton in December of '07, it peaked right around harvest time of '08, as you know, at about $900, dropped to $100 as of the first of the year, and now has come back up to around $300. The whole point of saying that is, this is a very volatile market. And fertilizer prices are tied to it, and so we see them yo-yo'ing all over the place.

It does underscore the point that was just made, and that we have made repeatedly, at least the two of us representing production agriculture; that it's important that we have a robust offset program that provides some income opportunities for farmers, besides just cost increases. And that's really the message that we want to get through here today, and to encourage folks in the Ag Committees, and others, to, as quickly as possible, weigh-in on this bill, so that the interests of agriculture can be dealt with in a very positive fashion.

Mr. THOMPSON. Thank you, Mr. Johnson.

Mr. JOHNSON. Thank you.

Chairwoman VELÁZQUEZ. Mr. Graves, do you have any more questions?

Mr. Sharp, at a recent roundtable on climate change, a major issue discussed was meeting workforce needs in a green collar economy. Can you talk about workforce challenges you see with this transition to a green economy?

Mr. SHARP. Well, I think the—in many respects, green jobs are, in some cases, no different than normal jobs, other than that they are in industries that have a green focus, such as energy-efficiency, or maybe in the renewables industry. In fact, many times, like roofing or other areas, these are opportunities that are no different than other ones, other than the fact that they're in areas that people are now pursuing in the green jobs area. So I think it's not as big a challenge in terms of training or things like that, and I think a lot of the skills that people need are ones that they already have. It's more of a marketing focus to look at how do I develop products that are focused on climate change, focused on energy-efficiency. And I see the industry making that shift. It's actually moving now to saying all right, I was making a product that was of some type. I can make some changes to it, now it cuts the carbon emissions, and many times those are easy changes to make. It's having the interest, and the will to do it. And I think that provides opportunities then for what become green jobs.

Chairwoman VELÁZQUEZ. How do you think we should insure that both rural and under-served areas are able to take advantage of these new opportunities?

Mr. SHARP. Well, I think that may be in the form of incentives around some of these newer technologies, number one. I think in terms of being able to help people develop innovations, and help them bring them to market, as I was saying earlier, so I think that's one way that it could be done.

I think in some of those under-served areas the costs of labor are going to be less, so that provides opportunities to provide a more economic approach.

Chairwoman VELÁZQUEZ. Okay. Well, let me just take this opportunity to thank you all. This is an issue that's not going away, and we'd rather be at the table, and something is going to happen. And we have to make sure that the concerns, and issues that are important to the small business sector are represented and discussed.

As you know, here in Washington, when we pass legislation, so many—often we find unintended consequences, so I hope that we could be proactive in having an open, honest discussion as to what legislation is drafted, and passed here reflects the issues of everyone that is going to be, in one way or another, directly, or indirectly impacted by such legislation. So, I want to thank the witnesses for today's testimony.

The Committee will continue to play an active role as climate change legislation goes forward. In coming days, I will be writing to our colleagues on the Energy and Commerce Committee, with a number of recommendations for how legislation can be crafted in a way that protects the needs of small businesses.

Now, thank you, again, and the Committee, and the hearing stands adjourned. Thank you.

[Whereupon, at 3:25 p.m., the Committee was 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

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STATEMENT
Of the Honorable Nydia M. Velázquez, Chairwoman
United States House of Representatives, Committee on Small Business
Full Committee Hearing: *"Climate Change Solutions for Small Businesses and Family Farmers"*
Wednesday, April 29, 2009

Within the scientific community, a clear consensus has formed about the need to address the dangers of climate change. The effects of global warming are indisputable, from rising sea levels to increasingly violent natural disasters. Repercussions like these would be disastrous not only in terms of human suffering, but also for our global economy.

Across the country, America's small businesses are stepping up to help address this problem. Today, the Chicago Climate Exchange boasts 3,500 members, and trades $9 million worth of carbon offsets. That's enough to mitigate annual emissions for 320,000 cars. Entrepreneurs and family farmers are pioneering innovative ways to reduce carbon in the atmosphere. Whether it's trading carbon credits or developing renewable fuels, small firms everywhere are making critical investments in a greener future.

If it is done right, reducing greenhouse gas emissions will mean more opportunities for our small business economy. As legislation to address climate change goes forward, we need to make sure that the final proposal not only protects our environment, but creates jobs. Properly constructed legislation will result in a win-win—it will expand small business jobs, while protecting the planet.

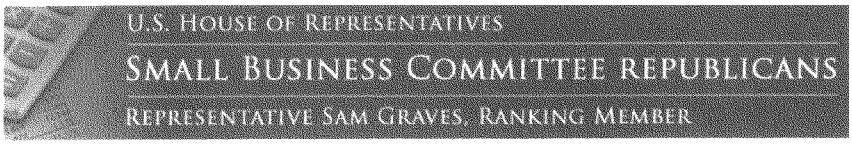
Despite these opportunities, some businesses understandably worry about the expense of addressing climate change. And, of course, it is important that entrepreneurs not be unfairly burdened as we transition to a carbon constrained economy. Let's not forget—small businesses are some of the largest energy consumers, so we need to carefully consider how capping carbon emissions will affect them.

In grappling with these issues, one thing has become clear—the only option *not* on the table is doing nothing. For better or worse, the EPA's recent decision to classify carbon dioxide as a dangerous pollutant means that it will now be regulated under the Clean Air Act. The Clean Air Act laws, which were enacted in 1970, simply were not written with this purpose in mind. Trying to regulate carbon dioxide emissions through the existing

Clean Air Act laws is like trying to put a square peg in a round hole. That means the question is no longer if we are going to reduce greenhouse gas emissions, but rather when and how.

If we are going to both address climate change *and* create new growth opportunities for small business, leadership will be required on all fronts—not just from the EPA, but from Congress, as well. That is the right way to go about this monumental task.

The panel before us today can testify about some of the ways in which small businesses and family farmers are pioneering the green revolution. I look forward to hearing about their experiences in this growing field. However, if they are going to continue this impressive work, they will need the proper support from all of us.



Opening Statement for Hearing on
Climate Change Solutions for Small Business and Family Farmers
Sam Graves
Ranking Member
Committee on Small Business
United States House of Representatives
Washington, DC
April 29, 2009

Good afternoon and thank you for participating in today's committee hearing titled, *"Climate Change Solutions for Small Businesses and Family Farmers."* I would like to thank Chairwoman Velázquez for holding this timely hearing.

The debate on climate change has shifted from global cooling concerns of the 1970's to global warming today. There seems to be a broad consensus that human activities are increasing carbon dioxide (CO2) emissions into the atmosphere; however, debate continues on how much those emissions are changing the climate, at what rate it will change, or what the exact effects will be.

It seems that you can find a statistic or scientist that can support any position on climate change. With such variation among scientists I think it's important that we take a very calculated approach towards addressing climate change. Dramatic new requirements for industry can have devastating effects on the economy-both for business and consumers.

Studies suggest that taxes from proposed climate change legislation could cost the average American household thousands per year in increased energy bills. Revenues would be collected from new mandates on industry and the cost will be passed on to consumers, both residential and commercial. Don't be fooled, these additional cost are an energy tax and will lead to job loss.

Considering the lagging economy, is this something we want to do? And when other countries like China and India don't have the same strict caps are we putting businesses at an unfair disadvantage?

Besides these concerns, I also find it alarming that nuclear power is not being considered as a renewable fuel source. If reducing CO2 emission is truly a goal, than ignoring nuclear power is a big mistake given that it already provides this country with 20% of its electricity. Simply allowing nuclear power to meet new renewable electricity standards would moderate costs to consumers.

Real solutions need to take into account regional differences throughout the country, take advantage of clean fuel within our borders including natural gas and nuclear power, offer incentives, and carefully consider how our economy will be impacted both domestically and internationally.

Again, I thank the Chairwoman for holding this hearing and look forward to the testimony of our witnesses.

Committee on Small Business
United States House of Representatives

Hearing on

Climate Change Solutions for Small Businesses and Family Farmers

Testimony of

Fred Yoder
National Corn Growers Association

April 29, 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 *Climate Change Solutions for Small Businesses and Family Farmers*. I applaud the committee's efforts to focus attention on the important role the agriculture industry has in the area of climate change and the issues facing rural America.

My name is Fred Yoder. I farm corn and soybeans near Plain City, Ohio and have been an active participant in Climate Change discussions for many years. In December, I had the opportunity to attend and participate in the United Nations World Climate Conference in Polland, where I was able to discuss the role of agriculture in reducing greenhouse gas emissions. Also, in addition to being part of NCGA's efforts I serve on the boards of numerous ad hoc groups, including 25x25 and the Ag Carbon Working Group.

I feel strongly that as Congress moves forward on climate legislation, that agriculture should be considered as part of the broader solution as we evaluate ways to reduce greenhouse gas emissions. Our Nations Corn Growers can play a significant role in a market based cap and trade system through sequestering carbon on agriculture lands. Numerous economic analyses have shown that a robust offset program will significantly reduce the costs of a cap and trade program.

In the near term, greenhouse gas reductions from livestock and agricultural conservation practices are the easiest and most readily available means of reducing greenhouse gas on a meaningful scale. The United States Environmental Protection Agency (EPA) estimates that agricultural and forestry lands can sequester 20% of all annual greenhouse gas emissions in the United States.

Further, agricultural producers have the potential to benefit from a properly crafted cap and trade program. Given these opportunities, it is critical that any climate change

legislation seeks to maximize agriculture's participation and ensure greenhouse gas reductions while also sustaining a strong farm economy.

For years, corn growers along with the rest of the agriculture industry, have been proactively engaging in conservation practices, such as no till or reduced tillage, which result in a net benefit of carbon stored in the soil. In fact, on my farm, I engage in both no till and reduced tillage. For the past five years, I have worked with my state association the Ohio Corn Growers, on a research with Dr. Rattan Lal, on soil carbon sequestration research. As part of our research, we have on-farm research plots at six different locations to study various soils and their carbon capture capabilities. I have been actively engaged from the beginning in defining the research protocols. This is just one example of what our industry has been working on.

NCGA has identified several priorities which I believe are critical elements to the agricultural sector within cap-and-trade legislation. We have worked closely as an industry to compile and identify key principles which have been embraced by a broad cross-section of the agriculture community.

First, NCGA feels the agricultural sector should not be subject to an emissions cap. Any, efforts to regulate greenhouse gas emissions from America's two million farms and ranches would be costly and, burdensome. Regulating agriculture in this manner could result in high costs with limited reduction of greenhouse gas emissions. The agriculture industry accounts for a very small percentage of emissions in the overall economy. In fact our industry accounts for only roughly 7% of all greenhouse gas emissions. Therefore, it would seem unreasonable to concentrate on regulations for such a small and diffuse industry.

However, tremendous environmental benefit can be achieved by allowing producers to provide low-cost, real and verifiable carbon offsets. Any cap-and-trade legislation should fully recognize the wide range of carbon mitigation or sequestration benefits that agriculture can provide. This could include sequestration of carbon on agricultural lands, reduction of emissions from livestock through dietary improvements and manure management, introduction of nitrogen efficiency technologies and a variety of other practices.

In addition, Agricultural offsets have the ability to significantly lower the cost of a cap-and-trade system while achieving real greenhouse gas emissions. Corn Growers and other producers can provide the offsets needed to allow changes in energy production technologies as well as investments in capitol and infrastructure to occur, while providing market liquidity and low-cost emissions reductions to help the market function properly. Furthermore, agricultural offsets could also spur ancillary environmental benefits in the form of clean water, air and better wildlife habitat, while at the same time enhancing the fertility and productivity of the soil resource needed to provide food, feed, fuel and fiber.

Of course, NCGA is closely monitoring the macro-economic impacts of cap-and-trade legislation to ensure that policies do not create an undue burden on the nation's

agriculture sector. We anticipate that the cost of fertilizer, fuel and other inputs will increase under a cap-and-trade system. Corn growers are subject to the volatility of the commodity markets with little ability to recoup costs associated with escalated input prices. Therefore, to ensure a vibrant U.S. agricultural economy in the long-term and an abundant domestic food supply, Congress should structure a cap-and-trade system in order for the cost to farmers and ranchers not to exceed the value of a potential offsets program.

NCGA feels that an important component of creating a successful cap-and-trade system is ensuring that domestic offsets are not artificially limited. Current estimates predict that agricultural and forestry lands can help to reduce up to 20% of greenhouse gas emissions in the U.S. on an annual basis. Therefore, we believe it is unwise and would distort the market if an artificial cap were placed on the amount of domestic offsets a covered entity can use to meet its yearly obligations. The goal should be to remove as much greenhouse gas from the atmosphere as possible. Artificial caps will prevent legitimate carbon sequestration, livestock methane capture, and manure gasification projects from occurring.

Another top priority of our industry, under a cap-and-trade system, includes the role of USDA. NCGA, along with our industry partners, feels that USDA should play a prominent role in developing the standards and administering the program for agricultural offsets. The Department has the institutional resources and technical expertise necessary to oversee a program that has the potential to be massive in scope. USDA has a proven record of working with farmers, in addition to studying, modeling and measuring conservation as well as production practices that sequester significant amounts of carbon. USDA should be given adequate flexibility to implement an offset program which allows them to account for new technologies and practices that emerge. This will in turn result in emission reductions from agricultural sources. We understand that EPA would likely issue the actual carbon credits and ensure the validity of the overall program. However, we feel strongly that USDA should play a key role for the implementation of agricultural offsets.

NCGA also believes that carbon sequestration and greenhouse gas mitigation rates should be based on sound science. There is a large body of scientific data which demonstrates that agricultural soils have the ability to sequester carbon, and technologies are available to effectively measure soil carbon content. In fact, the 2008 Farm Bill included a provision that directs the U.S. Department of Agriculture to develop guidelines and protocols for farmers to participate in a greenhouse gas offsets market. USDA has already begun developing a properly constructed, science based model that includes statistically relevant random field measurements to help maximize agriculture's ability to participate in an offsets market. Any new policies should include provisions for the development of future offset standards and revision of existing standards to account for changing technology and information.

It is also important that USDA establish measurement rates for various offset practices at the national or regional level. NCGA believes in a standards-based approach, rather than a project-based approach for measuring offsets. Real, verifiable credits can be achieved

without direct measurement of each individual offset project; however, third-party auditing can be employed to ensure the credibility of the system. Meanwhile, a project-based approach would be cost-prohibitive, particularly for smaller farming operations and would prevent many producers from participating in the offsets market. We believe that an acceptable level of accuracy is achievable under a standards-based approach with pre-calculated values based on sound science. This should not preclude the development of new technologies or innovative practices that would require initial field testing or project measuring; however, even these new types of credits should eventually transition to standard protocols and values for ease of adoption.

As Congress considers legislative proposals, we believe it is important to provide an initial list of project types that are eligible to be agricultural offsets. Both the regulated community and agricultural sector need assurances that agricultural offsets will be available. The regulated community should have confidence that a sufficient quantity of offsets will be available for purchase in order to comply with a mandatory cap. The agricultural sector needs to have clear direction on project types Congress considers to be eligible, in order to assess the full impact of cap and trade legislation on our industry. An initial, non-exhaustive list of project types in the legislation itself is critical to addressing these concerns. Shifting the burden of decision-making to an entity other than Congress generates uncertainty that should be avoided.

Concerning the question of permanence, it is important to emphasize the concept of contract duration rather than literal definition. The value of the carbon credit would likely have a strong correlation to the length of the contract. For instance, longer contract periods imply more risk for the seller and should result in a higher price. Policies to address reversals, both intentional and unintentional, will also need to be established. Intentional reversals should be considered a breach of contract and the seller would be held responsible based on the terms of the contact. Unintentional reversals, such as instances of natural disasters or other unforeseen circumstances, could be handled through a reserve pool or perhaps a mechanism similar to crop insurance. The bottom line is that risk must be managed appropriately for both the offset buyer and seller, and in most cases, the emphasis should be placed on contract duration rather than permanence.

An issue that continues to be of utmost importance to NCGA is the treatment of early actors in a cap-and-trade system. Agriculture is constantly evolving. As technologies and practices improve, farmers are converting to alternative tillage practices such as no-till or ridge-till. They are reducing fertilizer application rates and enhancing crop uptake of fertilizer nutrients. Some livestock producers are able to use methane digesters and invest in covers for manure storage or treatment facilities while others are able to reduce enteric emissions with dietary modifications. Producers that have taken these steps should not be placed at a competitive disadvantage by being excluded from compensation for future offsets that occur as a result of these ongoing efforts.

For example, some of our members have been participating in the Chicago Climate Exchange (CCX) for the several years. Others have been sequestering carbon through conservation practices outside of a trading market. These early actors should not be penalized for being pioneers in the area of no-till or low-till agriculture. Planting and

tillage decisions are made each year, and there is a no guarantee that a producer will decide to continue the same practice as the previous season. It is faulty to eliminate these early actors from the offset market based upon this assumption. In fact, even continuous no-till farms, which represent a small percentage of all U.S. acreage, have the capacity to continue to sequester additional carbon for many years in a row.

In addition, Congress should not establish policies that offer perverse incentives to producers that have heretofore been sequestering carbon in the soil. Of course, these early actors including those who had previously participated in CCX or other trading regimes would need to meet the new standards and contractual obligations, require ongoing actions by the offset seller to ensure that offsets will continue to occur, and only be paid for the future offsets that are a result of these ongoing actions and not for offsets that occurred in the past.

Finally, it is important to note that many practices undertaken to reduce greenhouse gas emissions will provide additional public benefits, such as clean water, wildlife habitat, and reduced soil erosion. Projects participating in a greenhouse gas offset market should not be excluded from also participating in other markets for environmental services that currently exist or may arise in the future. Allowing producers to "stack" credits will maximize the economic viability of carbon sequestration and manure management projects, ensuring more projects are undertaken and synergies with other environmental priorities are developed. We are hopeful that new climate initiatives will complement existing conservation programs within the Farm Bill.

In conclusion, it is our hope that we can continue to work with Congressional leaders to ensure Congress chooses the best path for agriculture and rural America. Finally, 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.

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Statement of Rob McNamara

Senior Vice President, National Roofing Contractors Association

House Committee on Small Business

"Climate Change Solutions for Small Business and Family Farmers"

April 29, 2009

Madame Chairwoman and distinguished members of the committee, thank you for the opportunity to testify on behalf of the National Roofing Contractors Association (NRCA) today to explore solutions to climate change and the impact on small businesses. I am Rob McNamara, president of F.J.A. Christiansen Roofing, a Tecta America Company and roofing contractor in Milwaukee, Wisconsin. I now serve as Senior Vice President of NRCA and will become President of the association on June 1, 2009.

Established in 1886, NRCA is one of the nation's oldest construction trade associations and the voice of professional roofing contractors worldwide. It is an association of roofing, roof deck, and waterproofing contractors; industry-related associate members, including manufacturers, distributors, architects, consultants, engineers, and city, state, and government agencies; and international members. NRCA has over 4,200 members from all 50 states and 54 countries. NRCA contractors typically are small, privately held companies, and the average member employs 45 people in peak season, with sales of $4.5 million per year.

The Role of Roofing in Climate Change Solutions

The roofing industry is uniquely positioned to play a significant role in developing innovative solutions to climate change and energy-related issues now being addressed by Congress. These opportunities include: 1) increased energy efficiency including "green" roof systems, such as vegetative and reflective ("cool") roofs in appropriate climates, and daylighting to reduce interior electric lighting requirements; and, 2) production of energy from rooftops via solar electric, solar thermal and wind energy generation.

First, with respect to increased building efficiency, currently, residential and commercial buildings in the U.S. account for approximately 30-40 percent of the carbon emissions generated by our nation. Providing incentives for building owners to adopt more energy-efficient roofing systems, and removing obstacles in federal law which now restrict the adoption of energy-efficient roofs, will provide numerous benefits to the public by enhancing energy conservation and reducing carbon emissions from the "built environment."

NRCA has a long history of promoting the development and installation of innovative energy-efficient roofing technologies. NRCA publishes two technical publications aimed at educating roofing contractors and building owners about the availability and benefits of energy-efficient roof systems. The *NRCA Green Roof Systems Manual* provides technical know-how to contractors on the installation and maintenance of vegetative roofs, and the *NRCA Guidelines for the Design of Energy-Efficient Roof Systems* is written for design professionals who want to incorporate energy-efficient roofs into their building designs. By providing these technical publications to roofing contractors and other industry participants, NRCA has been facilitating greater levels of investment in energy-efficient buildings that provide for a sustainable environment for many years.

Current trends toward the adoption of "green" buildings are key drivers of economic growth in our industry, and NRCA is working to maximize the environmental, energy conservation and economic benefits of expanding green buildings. NRCA contractor, manufacturer and distributor members are in the forefront of developing and installing a variety of energy-efficient technologies that can help reduce carbon emissions and provide other environmental benefits. These include vegetative roofs that integrate plants to reduce greenhouse gases and storm-water runoff, "cool" roofs that reduce energy consumption and the "urban heat island" effect by reflecting sunlight, and daylighting systems that maximize the use of natural light to reduce interior electric lighting requirements. NRCA's *Roofing, Energy and the Environment Series* provides online education to contractors and others regarding the installation of these "green" roofing technologies, as well as photovoltaic roof systems.

Second, the U.S. built environment continues to see the increased use of rooftop technologies to increase energy production from sustainable sources. These include photovoltaic roof systems (including "Built In Photovoltaic" products) that generate electricity from solar power, solar thermal rooftop installations to reduce energy requirements for heated water, and roof mounted wind turbines for power generation. Development of these and other green roofing technologies stimulates economic growth and job creation while simultaneously reducing energy consumption and protecting the environment.

In addition to conserving energy, roof surfaces across the nation offer an economical and ready-to-use platform for the production of clean, renewable energy using solar and wind

sources that are an alternative to traditional energy sources that impact climate change. The U.S. possesses about 225 billion square feet of stable roof surface among existing commercial and residential buildings, much of which could be used to capture solar and wind energy. According to the Center for Environmental Innovation in Roofing, if one-third of this area was used for solar energy production via photovoltaic roof systems, our rooftops could generate over 50,000 megawatts of renewable power annually or about 8% of our current electricity generating capacity. While based upon current solar technology, the power generation capabilities of photovoltaic systems would increase even further with advances in PV technology which we expect in the coming years.

Climate Change Legislation

NRCA is pleased to see that the "discussion draft" of climate-change legislation recently proposed by Representatives Henry Waxman (D-CA) and Rep. Edward Markey (D-MA) recognizes the positive role that energy-efficient roof systems can play in efforts to address this issue. As Congress considers legislation to address climate change issues, NRCA urges members to adopt market-based solutions and incentives wherever possible to achieve public policy goals in this area.

NRCA welcomes the opportunity to work constructively with Congress and other stakeholders on legislation that will maximize the potential of both energy-efficient and energy-producing roofing systems to contribute to efforts to reduce carbon emissions. While NRCA is still in the process of reviewing the 600-plus page "American Clean Energy and Security Act (ACES) of 2009," we have a number of comments on the proposal at this time.

The ACES proposal contains provisions to accelerate the adoption of so-called "cool" roofs that conserve energy and reduce carbon emissions by achieving higher levels of solar reflectance for both residential and commercial buildings. NRCA shares the objective of the authors of this proposal, which is to accelerate the adoption of energy-efficient roofs to the maximum extent feasible. It is critical to note, however, that different climate zones require different types of energy-efficient roofs to maximize energy conservation and environmental benefits. As such, we need to ensure that any legislation contains meaningful and flexible roof standards which reflect the reality of differing climatic and geographic zones and other important factors, and we are committed to working with Congress in this regard.

NRCA also shares the goals of the authors of the ACES proposal with respect to setting new targets for building codes in order to maximize energy efficiency in commercial and residential buildings. As mentioned previously, NRCA has been working for many years to facilitate the adoption of energy-efficient roofing systems as rapidly as possible. However, we do have concerns that the prescriptive approach taken in the proposal to rapidly accelerate energy-efficiency standards through building codes may not be

practical or feasible. Rather, we believe the construction industry's process for developing building codes through peer-reviewed and science-based processes that have been in place and well accepted for decades has generally served both the public and industry well. We urge Congress to work with the existing code bodies, construction industry and other stakeholders to maximize attainment of energy-efficiency goals while minimizing adverse economic impacts on businesses and consumers. NRCA looks forward to working with Congress to ensure that any energy-efficiency standards for roofing systems included in climate change legislation are effective, practical and achievable.

In support of this objective, NRCA urges Congress to consider providing tax incentives for building owners who install roofing systems that go beyond the requirements of existing building codes. For example, NRCA is working with industry partners on a proposal to provide a 30 percent tax credit for commercial roofs that significantly exceed current building code requirements for energy-efficiency through higher insulation levels. The reduction in carbon emissions from this proposal over five years is estimated at 12.2 million metric tons, which is equal to the emissions from an average coal-fired power plant over 2.6 years. NRCA believes this type of market-based solution would be a highly effective way to achieve the policy goals of the ACES proposal.

NRCA does have concerns about the impact of the cap-and-trade system in the ACES proposal, of which the basic outlines would be a cap on carbon emissions, along with a federal auction of emission allowances and the establishment of a market for trading such allowances. Given that a large percentage of roofing products contain asphalt-based and other energy-intensive materials, a cap-and-trade program could adversely impact the price-sensitive roofing industry by substantially raising input prices. Moreover, many of the details about exactly how the cap-and-trade program in the ACES proposal are not included in the discussion draft, and thus it is impossible to gauge the impact of this proposal without more specifics.

While a cap-and-trade program may ultimately create market opportunities for energy-efficient and energy-producing roofing systems, these benefits would be outweighed by significant increases in the cost of roofing materials or the potential negative consequences to our economy's overall health. Therefore, NRCA urges Congress to remember that higher costs will have to be passed on to consumers, and this could inhibit the growth of our industry and the adoption of more energy-efficient roofing.

EPA Greenhouse Gas (GHG) Endangerment Finding

NRCA has serious concerns with regard to the Environmental Protection Agency's recent "proposed endangerment finding" which if, implemented, will result in greenhouse gases being regulated under the Clean Air Act (CAA). We believe that the EPA's burdensome regulatory approach to addressing this issue would restrict the positive role that energy-

efficient and energy-producing roofing can play in reducing emissions from residential and commercial buildings. Moreover, this approach would significantly burden and subsequently reduce both the construction of new buildings and even existing roof replacement activity.

The EPA's action would trigger four major regulations and invasive carbon controls on buildings and other stationary emissions sources. Regulation of carbon emissions under the CAA would, according to a study by the U.S. Chamber of Commerce, subject 1.2 million buildings in the U.S. to Prevention of Significant Deterioration (PSD) permitting as a condition for new construction or modifications. This process can take 6-12 months and cost, on average, $125,120 with a paperwork burden of 866 hours. If only 40,000 of the 1.2 million buildings opt to try new construction or to make modifications, PSD compliance alone would cost over $5 billion and require 17,320 full-time employees. Finally, these same 1.2 million entities would have to obtain Title V operating permits as a condition of their operations, which requires at least a $25-per-ton compliance fee and grants a 60-day window for any U.S. citizen to challenge the permit by way of a citizen suit.

It is estimated that at least one million mid-size to large buildings already emit enough carbon emissions per year to become regulated stationary emissions sources and nearly 200,000 manufacturing operations would become regulated. The compliance costs for the four CAA programs triggered by an endangerment finding would be financially and administratively unreasonable for millions of new regulated entities. Also, Congress would have to vastly increase amounts appropriated to EPA, and perhaps have to appropriate greater amounts for state and local air quality grants, just to administer the permit programs.

The excessive regulation unleashed by the EPA's endangerment finding could have severe adverse impacts the construction industry generally and small businesses in particular. Many of NRCA's members have already had untold numbers of projects cancelled or put on hold indefinitely due to the current severe downturn in construction activity. The new permitting processes put in place by the EPA would further delay many construction projects that are key to the survival of small contractors in our industry. Even smaller roof replacement projects, the bread-and-butter of NRCA's members, have slowed greatly for residential and commercial roofing contractors alike. The advent of additional regulation and permitting would only serve to slow this activity to a virtual standstill.

Market-Based Approach to Climate Change

NRCA urges Congress to adopt market-based solutions and incentives to address climate change and energy issues. NRCA believes that Congress should remove current obstacles to an expansion of energy-efficient roofing that now exist in federal law. One

such obstacle could be removed by passage of the "Green Roofing Energy Efficiency Tax Act" (GREETA), H.R. 426.

GREETA is bipartisan legislation by Rep. Bill Pascrell (D-NJ) and Rep. Wally Herger (R-CA) to facilitate greater levels of investment in green technologies that reduce carbon emissions and also spur economic growth within the construction and manufacturing industries. The legislation amends section 168 of the Internal Revenue Code to provide a 20-year tax depreciation schedule for commercial roof systems that meet a benchmark energy-efficiency standard. NRCA commends Chairwoman Nydia Velazquez and Rep. Dennis Moore (D-KS) for cosponsoring GREETA.

Passage of GREETA is necessary because the depreciation schedule for nonresidential property was increased from 15 years to 39 years between 1981 and 1993. However, the current 39- year depreciation schedule is not a realistic measure of the average life span of a commercial roof. A study by Ducker Worldwide, a leading industrial research firm, determined the average life expectancy of a commercial roof to be 17.5 years.

The large disparity between the current 39-year depreciation schedule and the average life span of a commercial roof serves as a major disincentive for building owners to replace failing roofs. This disincentive is slowing the adoption of more advanced energy-efficient and environmentally-beneficial roofs, because an owner who replaces a roof before 39 years have elapsed must continue to depreciate that roof for tax purposes even though it no longer exists. A Treasury Department Report to Congress on Depreciation Recovery Periods and Methods (July, 2000) corroborated this quandary, finding "...a 'cascading' effect, where several roofs are being depreciated at the same time, even though only one is physically present." Given this situation, many building owners choose to do only piecemeal repairs, most often with older technology, rather than replace a failing roof in its entirety with new, more energy-efficient materials.

GREETA will rectify this situation by reducing the tax depreciation schedule for commercial roof systems from 39 to 20 years for roofs that meet the energy efficiency requirements of the benchmark Standard 90.1 of the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). Enactment of this legislation will accelerate the adoption of energy-efficient commercial roof systems by eliminating the disincentive in the tax code for building owners to install such systems. In doing so, GREETA will provide environmental benefits by reducing carbon emissions through enhanced energy conservation.

By accelerating demand for technologically-advanced "green" roofing systems, GREETA will:

- Reduce U.S. energy consumption by 13.3 million kilowatt hours annually;
- Cut carbon dioxide emissions by 20 million lbs. per year;

- Create 40,000 new "green-collar" manufacturing and contracting jobs;
- Add $1 billion of taxable annual revenue to the economy; and,
- Add 250 to 300 million square feet of roofing material installations annually.

Enactment of GREETA will also benefit millions of small business owners by eliminating or mitigating the "cascading effect" of having to depreciate more than one roof in instances where a roof must be replaced before the 39-year depreciation schedule has been completed. This tax simplification feature of GREETA for commercial building owners that install energy-efficient roofs is an even greater benefit for small businesses that own their building.

Given the environmental, energy conservation and economic benefits of GREETA, the legislation enjoys strong support among business groups and organized labor. The bill is supported by the United Union of Roofers, Waterproofers and Allied Workers, the AFL-CIO's Building and Construction Trades Department and the Joint Roofing Industry Labor and Management Committee. In addition to NRCA, other business groups that support GREETA include the Asphalt Roofing Manufacturers Association, Building Owners and Managers Association, International Council of Shopping Centers, National Association of Convenience Stores, and the Polyisocyanurate Insulation Manufacturers Association. GREETA also enjoys the strong support of several U.S. building material manufacturers with global operations.

Conclusion

To conclude, NRCA believes that recent advances in energy-efficient and energy-producing roof systems provide unique opportunities for our industry to play a significant role in providing numerous environmental, energy conservation and renewable energy benefits to the public. NRCA greatly appreciates this opportunity to testify today and looks forward to working with Congress on climate-change and energy-related legislation that meets the needs of roofing contractors and other industry participants across the nation.

National Farmers Union
Testimony of Roger Johnson

Before the
U.S. House of Representatives Small Business Committee

Climate Change Solutions for Small Businesses and Family Farmers

Wednesday, April 29, 2009
Washington, D.C.

STATEMENT OF ROGER JOHNSON, PRESIDENT
NATIONAL FARMERS UNION
BEFORE THE HOUSE COMMITTEE ON SMALL BUSINESS
CONCERNING: CLIMATE CHANGE SOLUTIONS FOR SMALL BUSINESSES AND FAMILY FARMERS
APRIL 29, 2009

Chairwoman Velazquez, Ranking Member Graves, and members of the committee, thank you for the opportunity to testify today. My name is Roger Johnson, and I am president of the National Farmers Union (NFU). NFU was founded in 1902 in Point, Texas, to help the family farmer address profitability issues and monopolistic practices while America was courting the Industrial Revolution. Today, with a membership of 250,000 farm and ranch families, NFU continues its original mission to protect and enhance the economic well-being and quality of life for family farmers, ranchers and their rural communities. We believe that farmers and ranchers have a significant role to play in addressing the energy and environmental challenges facing our nation.

The issue of climate change is complex to navigate and often requires access to a special dictionary to define words like additionality, permanence, early actors and leakage. Long before climate change legislation was a common coffee shop topic or seriously debated in Congress, NFU emerged as the leading voice for how agriculture can play a significant role in combating global climate change. Our members were early to recognize and acknowledge the negative effects climate change has on domestic food and fiber production. To address these issues, our policy supports a national, mandatory carbon emission cap and trade system to reduce non-farm greenhouse gas (GHG) emissions.

Failing to reduce GHG emissions poses significant economic impacts on agriculture and populations whose welfare is of special interest to the agricultural community. Studies of climate change scenarios show increased frequency of heat stress, droughts and flooding events will reduce crop yield and livestock productivity. According to the U.S. Department of Agriculture (USDA), the risks of crop failure will increase due to rising temperatures and variable rainfall; further, earlier spring seasons and warmer winter temperatures will increase survival rates of pathogens and parasites leading to disease concerns for crops and livestock.

Although several options exist to address climate change from a policy perspective, NFU believes the flexibility of a cap and trade program holds the most promise in making actual GHG emissions reductions while mitigating the overall energy cost increases resulting from such a program. Such a system could provide farmers and ranchers the opportunity to contribute to the solution of climate change by utilizing soil carbon sequestration and methane capture from certain livestock projects. These projects could be meaningful revenue streams for producers who will experience some increase in agricultural input costs.

On April 17, 2009 the Environmental Protection Agency (EPA) issued its "proposed endangerment finding" which reported GHG emissions are a threat to public health. This report was in response to a 2007 U.S. Supreme Court ruling that ordered the agency to determine whether carbon dioxide and other GHG emissions qualify as pollutants under the Clean Air Act. The proposed finding did not include any proposed regulations and is now open for public comment. While it is understood that an endangerment finding under a single provision of the Clean Air Act cannot by itself trigger regulation under the entire Act, if Congress fails to pass climate change legislation, the EPA will move to regulate GHG emissions. It is not reasonable to expect EPA to try to regulate agricultural GHG emissions on the farm, but a purely regulatory approach to addressing GHG emissions will bring all of the downside of increased energy inputs and none of the upside of carbon offset opportunities. For this reason among others, NFU supports a comprehensive legislative approach in addressing climate change.

Agriculture's Role in a Cap and Trade System

NFU strongly believes that the agriculture and forestry sectors should not be subject to an emissions cap as they are too small and diffuse to be directly regulated. According to analysis completed by USDA and EPA in 2005, the United States' two million farms and ranches emit minor quantities of GHG emissions, approximately 7 percent of all U.S. emissions. Establishing a regulatory scheme to capture emissions from each of these two million farms would be extremely costly and burdensome and not yield significant GHG emission reductions. EPA has also currently estimated carbon sequestration by forests and agricultural lands offset approximately 12 percent of annual GHG emissions from all sectors of the economy. It is expected a flexible offset program with appropriate financial incentives will accelerate sequestration practices under a cap and trade system; soil and forestry carbon sequestration has the capacity to offset 20 percent of all GHG emissions in the United States according to EPA. It is clear that in the near-term, carbon sequestration projects on agricultural and forestry lands are the easiest and most readily available means of reducing GHG emissions on a meaningful and expedited scale.

In April 2008, the Dole-Daschle 21st Century Agricultural Policy Project released a report, "The Role of Agriculture in Reducing Greenhouse Gas Emissions: Recommendations for a National Cap and Trade Program". This report cited analysis completed by EPA that estimated up to 168 million tons of carbon dioxide could be sequestered in U.S. agricultural soils on an annual basis. The Dole-Daschle report went on to illustrate EPA's projection of total income opportunity associated with the estimates at a price per ton range consistent with current modeling estimates of carbon permit prices:

$10/ton CO_2 = $1.17 billion/year
$15/ton CO_2 = $2.5 billion/year
$20/ton CO_2 = $3.4 billion /year

This income potential is significant to our farmers and ranchers who will be faced with further increased energy inputs. Energy-related GHG emissions related to the agricultural sector would be regulated upstream at the fuel supplier, electric utility or large industrial level. Our members do not argue with the reality they will face increased energy costs, but do not agree with those who attest there are no economic benefits from addressing climate change through the legislative process.

The distribution of emission allowances will be extremely important to the ultimate viability of a national cap and trade program. The majority of emission allowances should be auctioned by the federal government with the revenue generated used to mitigate the cost of a cap and trade program on impacted parties and foster the development of renewable, low-carbon energy sources and technologies. A portion of the allowances should be given away for free to critical sectors of the economy to reduce overall transition costs as well as to provide economic incentives to drive further carbon reductions.

Providing a percentage of overall allowances to the agricultural sector as proposed in the 2008 Lieberman-Warner climate change bill would offer important tools and flexibility for agriculture producers to implement activities that provide GHG benefits but may not technically fall within the scope of an offset program. For example, smaller agriculture operations are less likely to be in a position to generate offset credits simply due to the amount of offset credits they could generate not exceeding the cost of changing a practice of cost of compliance. However, they could engage in a practice appropriate for size that provides GHG emission reduction benefits, that project would be eligible for an appropriate allowance benefit as determined by USDA. Under this scenario, farmers and ranchers would be given the flexibility to participate in different aspects of a cap and trade program, maximizing both producer participation and environmental benefits for our society.

OFFSET PROGRAM

In addition to receiving allowances, mechanisms should be established that allow agriculture to generate offset credits by implementing practices to more quickly reduce GHGs. Agricultural offsets provide the easiest and most readily available means of reducing GHG emissions on a meaningful scale. Farmers and ranchers who are willing to work through the requirements and protocols of an offset program, to demonstrate GHG sequestration and/or reduction, should be able to sell these credits to regulated entities at a fair market price.

NFU Carbon Credit Program

In 2006, NFU became an aggregator of carbon credits on the Chicago Climate Exchange (CCX). CCX is North America's only, and the world's first, GHG emission registry, reduction and trading system for all six greenhouse gases. Our organization became involved in this effort with a goal of enhancing farm income through economically successful and environmentally sound land management practices that reduce or offset carbon emissions. Members of CCX make a voluntary, but legally binding commitment to reduce GHG emissions. Many Fortune 500 companies, multinational corporations, utility and power generation companies and municipalities are buying the credits for a variety of reasons. Some purchase credits to boost public relations, others have subsidiaries based in foreign countries and are obligated to reduce emissions or buy offset credits per the Kyoto Treaty and others are simply concerned about reducing GHG emissions.

Currently, NFU is the largest aggregator of agriculture carbon credits on CCX. We currently have more than 5 million acres enrolled across 31 states; nearly $9.5 million has been earned for the almost 4,000 producers that have voluntarily enrolled in our program. The organization has learned valuable lessons on how to properly construct a cap and trade program. The CCX

program has developed standardized trading instruments and workable protocols for aggregation, registration, verification and sale of agricultural and forestry offsets.

All existing rules-based and independently verified projects implemented under current programs, such as CCX, should be integrated into the federal program to serve several important policy objectives. Specifically, incorporating existing projects will prevent potential backsliding as well as continue to encourage agriculture offset projects while a federal program is being debated, enacted and implemented. The legislative draft from Energy and Commerce Committee Chairman Waxman does not include recognition of the CCX registry, generated offsets and early actors which poses a significant concern for our program participants.

USDA's Role

With its more than 20 years of targeted climate change research, NFU believes USDA is well positioned to promulgate the rules and administer the agricultural offset program. USDA should be directed to promulgate regulations determining eligibility of agricultural and forestry offset projects and to administer related elements of such a program.

Currently, USDA maintains observation and data systems to monitor and track changes in the climate as well as access to the benefits of actions taken to reduce GHG emissions and increase carbon sequestration. USDA has existing statutory authority from the 2008 Farm Bill, technical expertise and institutional resources which provide the necessary launching pad to create and administer any offset program. USDA can leverage its experience working with farmers, in addition to its technical expertise modeling and measuring farming practices' ability to sequester carbon and promote appropriate manure management practices, to ensure maximum participation in the agricultural community. Agencies within USDA that have been working on agriculture sequestration projects include the Natural Resource Conservation Service; Cooperative State Research, Education, and Extension Service; Farm Service Agency, Economic Research Service; and Agricultural Research Service. Furthermore, for most farmers and ranchers in the country, USDA offices are located nearby.

Early Actors

Farmers, ranchers and landowners that have already adopted certain practices to reduce GHG emissions and entered into a voluntary, yet legally-binding contract should be allowed to participate under a federal mandatory cap and trade offset program. Often referred to as "early actors," these individuals are leaders within their communities who should be recognized and rewarded, rather than penalized and excluded. Some offset critics suggest these early actors should not be compensated for carbon sequestered under a federal offset program. Such an argument, however, runs counter to the overall purpose of an offset program – to encourage widespread adoption of practices that reduce GHG emissions or sequester carbon. We do not advocate that early actors be automatically issued offset credits or receive retroactive payments. However, if an early actor meets and complies with all offset protocols for a practice, technique or project type under the new law then he or she should be eligible for offset credits and paid for future GHG emissions reductions or sequestered carbon.

Unlimited Domestic Offsets
As stated earlier in my testimony, EPA estimates agricultural soils and forestry lands have the potential to sequester enough carbon to offset 20 percent of annual emissions in the United States. With a goal of removing as much GHG from the atmosphere as possible, it would seem counterproductive to limit the amount or use of domestic offsets. Legislation should not artificially limit the amount of domestic agricultural project offsets. The current Waxman-Markey discussion draft limits the total quantity of offsets to 2 billion tons, split between domestic and international offsets. Domestic agriculture and forestry projects alone have the potential to meet the limit, yet we do not know what other types of non-agricultural activities will qualify under the offset program. In order to aggressively address the impacts of climate change, there should be no limit on offsets, such as agriculture and forestry, which provide the easiest and most readily available means to reduce GHG emissions on a meaningful scale.

OTHER CONCERNS/PRIORITIES
There are three other topics I would like to touch on briefing before I conclude.
Additionality – The definition of this term is highly subject to the perspective of the individual providing the definition. The basic concept of additionality is a project or activity should receive credit under a cap and trade program to the extent that it generates benefits that are in "addition" to what would have occurred absent the project. NFU supports the establishment of a static baseline of activity to measure against when determining additionality. The fixed baseline should establish what practices were being performed on a specific piece of land on a specific date; any activity that results in GHG reductions measured against that baseline should be deemed eligible/additional. Defining this term quickly becomes a slippery policy slope that can easily limit participation under an offset program. Some argue projects would not be additional if a practice is common in a given geographic area, or if the practice would have occurred due to a pre-existing law or regulation, or if the rationale behind implementing the action includes justifications beyond a cap and trade program. All of these arguments create a perverse definition of additionality that would exclude real projects that offer real GHG emission reductions.

Reversals – The establishment of a reserve pool of offsets to address potential reversals of carbon sequestration projects is prudent for the integrity of the program. However, a differentiation must be made between anthropogenic (human-caused) and non-anthropogenic (natural) emissions. Offset providers should not be penalized for the reversal of projects outside their scope of control. The purpose of the cap and trade program would be to reduce man-made/anthropogenic carbon emissions, not naturally occurring emissions. Therefore, in establishing a reserve pool of offsets, participants should not be required to account for carbon reversals caused by natural acts such as hurricanes, drought and wildfires. A key factor in the establishment of the reserve fund is who pays for such a system. NFU wholly supports holding an individual responsible for intentionally reversing a carbon sequestration project. Under the Farmers Union Carbon Credit Program a percentage of offsets are set aside in a reserve pool for reversals; penalties are levied against enrollees who intentionally break their contract and reverse a carbon sequestration project. However, it is not equitable to place the cost of reversals on offset providers for unintentional/non-anthropogenic reversals. Resolving such reversals should be the responsibility of the government, not individual offset project representative.

Stackable Credits – The benefits accrued from a project established under a GHG offset market often provide additional environmental benefits including clean water, wildlife habitat and reduction of soil erosion. Sometimes these practices provide additional income to the producer beyond just the economic value of the offsets. This is a good thing and should be encouraged. Allowing offset project managers to "stack" credits will maximize economic benefits to producers resulting in additional projects launched and further environmental benefits accrued.

CONCLUSION

Enacting legislation to address global climate change will be one of the most significant challenges and opportunities for this Congress to undertake. Balancing environmental goals, consumer and economic impacts will be difficult. Yet, the chorus of those calling for action continues to get louder. While my testimony aims to highlight some of the priorities for National Farmers Union in the climate change debate, there is no question other issues and concerns will arise. As an organization that has been around for more than 100 years, we stand ready to help Congress accomplish one of the most significant policy challenges facing us today. I look forward to answering any questions committee members may have; thank you again for including the perspective of America's family farmers and ranchers in this issue.

BIOGRAPHY

Roger Johnson
National Farmers Union President

Roger Johnson was elected National Farmers Union's 14th president during the organization's 107th anniversary convention in 2009.

Prior to leading the family farm organization, Johnson, a third-generation family farmer from Turtle Lake, N.D., served as North Dakota Agriculture Commissioner, a position he was first elected to in 1996. While Agriculture Commissioner, Johnson served on the State Industrial Commission, the North Dakota Trade Office Advisory Board, and the State Board of Agricultural Research and Education, among many other boards and commissions.

From 2007-2008, Johnson served as president of the National Association of State Departments of Agriculture (NASDA). As NASDA president, he played a key role in crafting the 2008 Farm Bill, pressing for provisions that benefit agricultural producers, such as a permanent disaster program, ending the ban on interstate shipment of state-inspected meat, the re-balancing of loan rates for program crops and farm-based renewable energy. Johnson was chairman of NASDA's Rural Development and Financial Security Committee from 2000 to 2007.

Johnson is a past president of the Midwestern Association of State Departments of Agriculture (MASDA), past president of the Food Export Association of the Midwest and a former chairman of the Interstate Pest Control Compact.

Johnson grew up in Farmers Union, participating in the organization's youth programs, serving as a county president and chairman of the board of a local Farmers Union cooperative. Johnson graduated from North Dakota State University with a degree in agricultural economics.

Johnson and his wife, Anita, are the proud parents of a daughter and two sons.

AIRCUITY™

Written Testimony of

Gordon P. Sharp
Chairman
Aircuity, Inc

Before

The House Small Business Committee

On

Climate Change Solutions for Small Businesses and Family Farmers

April 29, 2009
Washington, DC

Version A

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Chairwoman Velazquez, Ranking Member Graves and members of the Committee, thank you for the opportunity to speak before you today on how small business can and is currently addressing climate change. My name is Gordon Sharp, and I am the Chairman and founder of Aircuity, Inc., a small business company located in Newton, Massachusetts that has developed innovative technology for enabling greater commercial building energy efficiency and reduced green house gas emissions.

In terms of my personal background, for over 25 years I have been an active entrepreneur founding and growing small businesses involved with developing and commercializing innovative technology for commercial and institutional buildings. I am a graduate of MIT and also hold over 25 US patents primarily related to inventions that reduce demand for energy used by a building's HVAC (Heating, Ventilating and Air Conditioning) systems.

My background is representative of the role that small businesses can and have played in developing innovative technologies to solve existing market problems. This is certainly true when it comes to climate change as there are countless small businesses working to develop and commercialize technologies for everything from renewable energy sources such as solar, wind, biomass and geothermal to the capture, sequestration and mitigation of CO2 and methane gasses to improved energy efficiency of existing residential and commercial buildings.

Aircuity is focused on providing commercial building owners with a cost-effective means to reduce the amount of energy required to heat, cool and ventilate their buildings. As a whole, buildings represent the single largest category of energy use and greenhouse gas emission generator. Of that, commercial buildings account for 36% of all electricity consumed and 18% of US primary energy end use. Within total commercial building energy use, the largest category is HVAC which has grown to more than 33% of total use as the energy savings from decades-long energy lighting retrofits have reduced the percent of energy being consumed for building lighting. Today commercial building HVAC energy efficiency remains one of the most compelling opportunities to achieve near-term impactful climate change. Many small businesses are attacking this opportunity from a variety of vantage points, whether it be through services such as energy audits and retro-commissioning, or the development of advanced HVAC equipment technologies such as electronic filtration or high-efficiency heat exchangers, or with technology such as Aircuity's that enables commercial building ventilation systems to work as designed for energy savings without sacrificing occupant, comfort, health or productivity.

Today I would like to provide two examples of small businesses that are having an impact on climate change as well as to share some of my experiences, successes and the challenges of being a small business in the field of building energy efficiency. Finally, I will provide you some recent market feedback on the growth and interest in this field.

Overview of Aircuity, Inc and It's Energy Savings Solutions

Aircuity was formed in 2000 as a spinoff from the Phoenix Controls Corporation, another small business that I founded and for which I was President and CEO and later sold to Honeywell. Whereas Phoenix Controls, which will be discussed later, represents a mature small business that was acquired by a large multinational, Aircuity represents a younger small business with about 30 employees that is now moving into a rapid growth stage. Our core product is a commercial building energy and environment information system that is used to implement energy efficiency solutions and services that can also help to improve the quality of the indoor environment. Our main focus is on optimizing building ventilation and the use of outside air in all types of commercial facilities such as office buildings, educational facilities, laboratories, healthcare and public assembly related facilities. The control and use of outside air and ventilation represents the single largest controllable factor affecting HVAC related building energy efficiency and its indoor environmental performance.

At the heart of Aircuity's technology is its OptiNet multiplexed sensing system for which Aircuity received an R&D100 award for innovation and social impact in 2006. This innovative technology changes the economics and reliability of sensing the indoor environment by taking sensors such as carbon dioxide, humidity or even dust/particulates and odor/VOC's (Volatile Organic Compounds) out of the room environment that is to be sensed. Instead a patented networked air sampling architecture, routing air packets the way data networks route data packets, is used to sample as many as 20 or 30 rooms sequentially with just one set of high quality sensors in a multiplexed fashion. This approach addresses the well-acknowledged failures of conventional sensing approaches to successfully enable several cost effective existing and new solutions to make building ventilation more energy efficient.

For example, offices, classrooms, healthcare facilities, and public assembly rooms such as this hearing room can benefit from an approach we call healthy demand control ventilation. Rather than use a fixed amount of outside air ventilation regardless of the number of people in a room, this approach varies this ventilation based on the number of people in the space through sensing carbon dioxide levels. Additionally, other parameters such as dust and particulates as well as odors can be sensed to provide additional fresh air when it may occasionally be needed. Since many spaces often have far less people in them then the peak levels to which they were designed, considerable energy can be saved by not flooding these spaces with excess conditioned outside air. Typical paybacks for these solutions range from 1 to 4 years.

Another very impactful energy efficient solution we enable is for research laboratories. By way of background, laboratory facilities require very large amounts of outside air for ventilation and exhaust of chemical vapors. This outside air must be cooled and or heated, supplied into, and exhausted from the building all of which consumes a lot of energy. As such these facilities are

extremely energy intense and require 5 to up to 10 times the energy per square foot of an office building. For example, on many college campuses research laboratories consume 10 to 40% of the total campus energy consumption.

In laboratories we apply a similar demand control approach that is based on sensing the presence or absence of air contaminants in the lab room's environment. This novel air quality based demand control approach can safely reduce the use of outside air in laboratories by over 50% from currently used levels. With Aircuity, high levels of outside air are only used when needed. This intelligent sensing approach reduces lab ventilation to safe minimum levels for over 97% of the time since the air in a research lab is often quite clean and it is wasteful to dilute clean air with more clean air. Typical paybacks for our systems in labs range from under one year to about 2.5 years.

Although our products are often used by larger organizations to create green and high performance buildings we usually sell our products directly to independent sales representative firms that are also small businesses that then resell the product as well as commission and provide annual services for it. Furthermore other small businesses are typically involved in the installation of this equipment and in building retro-commissioning (for existing buildings), further increasing the economic and job creation impact of these systems.

In terms of climate change, the impact of the products that should make up just our expected 2009 calendar year bookings should save our customers conservatively about $7.5 million annually in energy consumption. This represents an annual savings of 38,700 metric tons or 85 million pounds of CO2 and is equivalent to the impact of 30.5 Megawatts of solar PV capacity that would cost about $225 million to purchase and install and is about 7.5% of the solar PV capacity installed in 2008 in the US. The future potential in this market area is enormous for which we are just beginning to scratch the surface.

As an example of our greenhouse gas impact from late last year, we booked an order to retrofit our systems into over 10 buildings at Arizona State University. Included in this are the Biodesign A and B lab buildings that are LEED Platinum green buildings and won the 2006 R&D lab of the year award. ASU has estimated that these two buildings can save over $1 million of energy a year or a carbon footprint reduction of over 5,000 Metric tons of CO2 (11 million pounds of CO2) or the equivalent of about 1,000 cars or the energy used by about 425 homes.

Another example is the University of Pennsylvania, which among a large list of potential sustainability measures to reduce greenhouse gas emissions put Aircuity at the top of it's list in terms of carbon footprint reduction and positive economic impact due to a fast payback from energy savings. In fact when Secretary Chu toured UPenn as part of a recent conference on green jobs with Vice President Biden, Secretary Chu was told about Aircuity and was interested

enough to ask for a follow-up conference call to get more details on our approaches to save energy.

In addition to developing products to save energy, Aircuity is also working with it's landlord to green it's facility through, for example a completed demonstration project involving a white or cool roof area as well as a small green or vegetated roof area that we show to visitors of our facility. We have also invested into an engineering and architectural design project to develop the most sustainable office fit-out project ever done that also likely involves the largest number of energy efficient HVAC systems and design approaches ever used in one building. Although we are not yet ready to build this facility we have leveraged these efforts to educate others about the concepts used in this design through presentations such as at last year's Greenbuild, which is the USGBC's annual green building conference.

Brief Overview of Phoenix Controls, a "Mature" Small Business

As mentioned above Aircuity was formed as a spinoff from the Phoenix Controls Corporation in 2000 which I founded in 1985 and had sales in 1998 of about $25 million. If not for being a subsidiary of Honeywell today it would by its size still be considered a small business. It is a world leading manufacturer of unique and innovative airflow controls that also safely reduce the demand for outside air in laboratory research and healthcare facilities.

At Phoenix Controls we developed new technologies that made a first step to safely reducing the use of outside air upon which Aircuity has further improved for even greater savings. However, Phoenix Controls technology alone has made a significant impact on reducing the carbon footprint of these facilities. In fact, the current installed base of Phoenix energy efficiency airflow controls is saving approximately $1.1Billion of energy savings annually equal to a carbon footprint reduction of 5.6 million metric tons of CO2. This is equivalent to the average climate change impact of 4.5 Gigawatts of solar PV panels or the energy equivalent of 1 ¼ days of imported foreign oil. Furthermore, the current annual sales of Honeywell's Phoenix Controls subsidiary alone had a climate change impact approximately equal to the impact of the 400 Megawatts of solar PV capacity that was newly installed in the US in 2008.

Common Objections to Energy Efficiency Solutions

When it comes to putting in energy efficient solutions into new or existing buildings, a common objection that is raised is the increase in cost that these solutions including our own systems can potentially add to a building. This objection can be used to veto these additions particularly when the decision is being made by project management staff that do not have a larger fiscal view of the project or have budgets that did not originally contain funding for these solutions. In reality, energy efficiency solutions that have even 5 year paybacks are excellent financial

investments with IRR's of 15%. On the other hand a 2 year payback has an IRR of almost 50%. These are all very good investments that also have the bonus of reducing greenhouse gases.

For anyone who truly looks at the financial returns from energy efficiency the issue of cost is a red herring since the economics and life cycle benefits are often very positive and typically better than those of renewable energy projects. Another reason these solutions may not be approved is perhaps that the extra capital is not available, however in a normal economic climate; reasonable paybacks can be financed in numerous ways.

As a result, the more likely reason is that the building owner is concerned that the projected savings are not real, the equipment does not function as advertised, it will create new problems of some type, or that other costs such as increased maintenance may significantly reduce these savings. Most of these issues are relevant to new and emerging vs. established energy efficiency solutions since the potential customer may have limited or no experience with the energy efficiency solution or there is a lack of a large number of sufficiently credible reference installations that the owner can investigate.

Unfortunately most new technologies and energy efficiency solutions are created by small businesses that additionally lack the credibility, established contacts, and financial resources to establish the many pilot and reference projects needed to prove out the solutions and move through this period from early adopter to mainstream market. This is also known as crossing the chasm. As I have experienced personally with my own innovative technologies and solutions, as the expression goes, "pioneers are the ones with the arrows in their backs".

Lastly, there is one other reason why even proven energy efficiency solutions and projects are cancelled or passed over. This is frankly related to the fact that some organization's have a lack of interest in cutting operating costs due to a predominate organizational focus on growing top line growth with much less interest on containing and reducing operating expenses. As such, energy efficiency projects never get to the top of the list of initiative to pursue even when they have proven and very positive financial returns.

Helping Small Energy Efficiency Related Small Businesses Cross the Chasm

Due to the perhaps healthy skepticism of new energy savings solutions introduced by small businesses, many organizations will discount the projected energy savings by some factor making it harder to reach the organization's financial hurdle rate for these projects. Once the technologies and products have been piloted and tried out the discount factor is reduced and it becomes much easier to have projects approved. One means to counter this initial resistance is to use available incentives and rebates from utilities or from the government to reduce the financial barriers to these initial or pilot projects. Over time these incentives become less

important as the new technologies become more proven and accepted. Carbon credits may also potentially provide another means to sweeten the pot for these projects.

Current Feedback on Market Perceptions of Energy Efficiency and Climate Change

The change in the market's assessment and attitudes regarding energy efficiency over the past several years has been dramatic. When Aircuity's technology was commercially introduced in 2005, most of the focus in what we call the clean tech space was around renewable and alternative energy sources. The technology innovation drive was to develop better sources of energy to replace fossil fuels. However, with renewable energy initiatives and alternative fuels years away from commercialization, the industry's focus has turned to energy efficiency (making existing commercial buildings use less energy to operate) as the most impactful means of achieving a meaningful overall reduction in energy consumption and green house gas emissions. Aircuity's business has nearly tripled year-over-year due to both the cost-effectiveness of our solution and the market's conviction of the benefits of energy efficiency. While we remain a small business in terms of employees (currently 34) and revenues, the pace of our growth continues to accelerate due to several important factors.

First, is the increased number of installed Aircuity sites which now numbers more than 70 and includes some of the most prestigious owners of commercial and institutional buildings. Second, is the clear policy mandate from CEO's and college and university presidents to make carbon footprint reduction to combat climate change a priority. The American College & University Presidents Climate Commitment now involves over 620 universities committed to serious efforts to reduce their energy consumption and carbon footprint. The private sector is equally engaged in the efforts around climate change as major corporations and real estate firms are investing capital to effect energy savings and green house emission reductions. Third, is the economic driver of a declining top line in corporate revenues and non-profit endowments. Due to the new recessionary economy, organizations are increasingly focused on sustainable cost savings. The reduction in energy spend through cost-effective energy efficiency measures has become an effective tool in this drive for cost reduction.

Further evidence of these effects can be seen in the literally exponential growth of the green building movement as initially promoted by the USGBC (US Green Building Council) and now by many other organizations such as ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) and the AIA (American Institute of Architects) who also have major initiatives and efforts to address climate change. In the last 4 years the value of green building construction has gone from about 2 % to a level approaching almost 10% of new construction starts By 2013, McGraw-Hill Construction estimates today's overall green building market to more than double, reaching between $96 -$140 billion versus $36-$49 billion today for residential and nonresidential buildings.

Conclusion

Technology innovation will continue to be the driver for overall climate change and small business remains the engine of that technology innovation as entrepreneurs team up with private and public investors to deliver tangible benefits to the markets they serve. There has never been a more important time for small businesses and entrepreneurs to pursue innovation for new as well as existing technologies that can deliver real energy benefits and sustainable climate change. Appropriate and well conceived government based incentives can potentially help these entrepreneurs and small businesses accelerate the product development cycle to full commercialization of meaningful new technologies at a time when it matters most.

Aircuity is proud to be one of many small businesses working to deliver cost-effective solutions to energy efficiency and climate change within the markets it serves. I want to thank the Chairwoman Velazquez and Ranking Member Graves and the Committee for the opportunity to appear here today and I would be happy to answer any questions that you might have.

Statement of
Lawrence W. Kavanagh
Vice President, Environment and Technology
American Iron and Steel Institute
Washington, D.C.

Submitted for the Record
Committee on Small Business
U.S. House of Representatives
For its consideration of
American Clean Energy and Security Act
April 2009

Introduction

My name is Lawrence W. Kavanagh and I am Vice President, Environment and Technology, of the American Iron and Steel Institute (AISI). AISI represents 24 member companies in North America, and our members make 75% of the steel produced in the United States. Prior to the current economic downturn, the industry directly employed approximately 165,000 persons in the United States, supported a total of 1.2 million jobs overall and contributed $350 billion to the economy annually.

First, let me thank committee members and staff for inviting us to participate in this process. I would like to begin with the steel industry's most important issue--competitiveness:

- The domestic steel industry is the lowest CO_2 emitter among world steelmaking nations as a result of billions of dollars of investment in process improvements;
- The steel industry has reduced energy per ton of steel produced by 33% since 1990, and as a result of this achievement, our processes are pushing against their energy limits as defined by the laws of physics;
- It is preferable, both economically and environmentally, to produce steel in the USA;
- Steel markets are global, which means that customers have the option to purchase steel from countries not adopting similar climate measures, so U.S. manufacturers cannot pass through increased energy costs.

The new green economy will require a major investment in our infrastructure. Steel will be a significant part of that investment. Despite the current downturn, the World Steel Association projects that world steel demand will double by

2050. Much of this steel will form the backbone of any green grid--- for example, generation sources like wind power are much more steel intensive than their fossil-fueled equivalents. The steel for these new energy alternatives should be built here in the United States, the best place to make steel in the world, from an environmental standpoint.

Our ability to stay competitive in the world economy means we need fair and strong trade laws that are rigorously enforced. *The same is true for climate - we need fair climate laws with global reach that can be enforced.* It goes without saying that in a market open to imports, such as ours, any legislation that undermines the competitiveness of U.S. mills will encourage steel production to leave this market in favor of markets with *lower* environmental standards. Such an outcome will necessarily result in *higher* volumes of greenhouse gas emissions worldwide. In other words, any climate change legislation that does not adequately account for competitiveness issues will have precisely the opposite effect from that intended by its supporters. To prevent this unintended consequence, we believe there are fundamental components that must be part of any climate policy to ensure fairness and global reach including:

1. Emission allowances stability: The steel industry has been concerned about energy use and CO_2 emissions for two decades and thus the processes we operate today are very near their limits regarding these two parameters. Therefore, there is very little incremental CO_2 emissions reduction possible until new technology is available. This means that a general pool of free allowances that all energy intensive sectors compete for and that declines in size over time does not work. Steel requires a sufficient and stable pool of free allowances while we work to develop these new technologies.

2. Energy Costs: Domestic climate policy will increase energy costs, a significant competitiveness issue for steel for the reasons noted. Our industry uses coal, electricity and natural gas in great quantities. The increased cost of each of these energy sources, beyond the price of allowances themselves, needs to be offset (e.g., through the direct grant of allowances) in order that our global competitiveness is not harmed.

3. Border adjustment: An effective WTO-legal border adjustment mechanism must be a significant part of any climate proposal to account for the cost burden of more stringent climate policies here vs. our international competition.

The discussion draft addresses these points to varying extents. We would like to bring three key components of the draft to your attention and offer suggestions for strengthening these provisions.

1. Grants of Allowances for Direct Emissions Energy Intensive Manufacturers

This important provision of the bill reflects the authors' understanding of the challenges facing energy intensive industry and we appreciate its inclusion in the bill. However, we believe several changes need to be made including: directly designating steel as a trade-affected industry; stabilizing the pool of allowances so that the overall size is sufficient to support all industries that qualify and ensuring that the size of the pool does not decline until new technologies are available commercially. The full measure of allowances needs to be granted to energy intensive industries, not 85% of the full amount. The energy efficiency of steelmakers today is such that a 15% reduction is not possible and would serve merely as a penalty and not an incentive. Finally, if additional sectors not envisioned by the drafters are included in this same pool of allowances, a 15% allotment will fall far short of providing the necessary assistance for industry.

Regarding availability of new technologies, I want you to be aware that the domestic steel industry is aggressively developing technologies that hold the promise of a dramatic step-change in performance. To that end, the industry is steadily investing in so-called breakthrough technologies. The resulting transformational processes being developed over the next 15 to 20 years could result in a steel industry that is largely carbon-free. Widespread adoption of new technology historically has proven to take from two to three decades in our industry. We are currently supporting breakthrough technology projects at the Massachusetts Institute of Technology and the University of Utah.

2. Energy Price Volatility and Increased Energy Costs

All forms of energy (coal, natural gas and electricity) have the potential to suffer a dramatic increase in cost as a result of climate policy. The bill does not presently address coal or natural gas cost increases and uses power plant emissions to grant allowances as a proxy for electricity cost increases.

Power plant emissions are a poor surrogate for electricity cost increases as they only reflect the component of electricity cost attributable to the price of carbon. Much of the future increased cost of electricity will come from the cost of capital equipment related to any or all of the following: fuel switching, deployment of waste gas capture/regeneration technology, deployment of carbon capture and sequestration technology and deployment of wind, nuclear and other clean energy technologies.

Energy costs are 20% or more of the cost of making steel. It is therefore unmistakably clear that a sharp increase in total energy cost will affect our competitive position in the global marketplace. The bill needs a comprehensive energy impact formula that considers coal, natural gas cost increases and electricity compensates for them for trade-exposed and energy-intensive industries.

We have been advised it is difficult to separate historical market forces for energy commodities from the influence of carbon policy. We believe that sufficient history of regional energy costs exists to readily establish historical averages and ranges to compare against costs after a new climate regime is in place.

3. Border Adjustability

As proposed, the bill has a significant lag before any assessment of comparable action by our trading partners is made. Years pass before any counterbalancing action is taken to adjust for competitive advantages gained in other countries that invest far less in climate policy than domestic manufacturers. Such evaluations of comparable action need to occur at the same time domestic manufacturers are subject to regulation because any time lag offers significant competitive advantage to our competitors. Steel is a very cyclical business and even one or two years of legislated advantage will be enough to damage US producers who are, as noted above, world leaders in reducing CO_2 emissions.

Finally, we are concerned that the bill as written leaves sole discretion to the Executive Branch in determining the continued existence of competitiveness issues, developing country compatibility or job loss. Congress should have a defined role in this critical process before any competitiveness program is phased out.

Conclusion

It is very timely to talk about competitiveness issues as the Committee on Energy and Commerce moves towards reporting out this bill. As recently as eight months ago, our industry was running near full capacity and annually producing more than 100 million tons of steel. Today, we are producing less than one half of that amount as demand for steel and the products that contain steel, such as automobiles and appliances, has crashed. But even as demand has plummeted, imports of finished steel have hardly changed at all in real terms. The result of this behavior by our trading partners is that as a percentage of steel consumed in the United States, imports' share of the domestic steel market has doubled versus

a year ago at this time. Finished steel import market share in March was estimated at close to 30%, with China providing the largest volume of finished imports from offshore. Directly relevant to your climate policy considerations, China's steel industry now accounts for 50 percent of the world's production of CO_2 from steelmaking—approximately equal to all the other steel mills in the world combined. And according to a recent poll, only 18 percent of Chinese companies believe they could do well economically if they adopted sound environmental policies, as reported in a 2009 assessment of environmental regulation of the steel industry in China issued by the Alliance for American Manufacturing.

In light of these practices, legislation must address the anticipated time lag before other nations invest similarly in reducing carbon emissions.

We appreciate the opportunity to appear before your committee and hope that as this process moves along, the House will avoid "one size fits all" solutions. What works in one sector of our economy may not work well in another. In a real sense, whether domestic energy-intensive manufacturers will survive is a "transition rule" issue. So long as everyone has to play by the same rules, the domestic steel industry will compete and thrive. But if our competitors are granted an advantage, steel production will move offshore. The new energy efficient economy will require a lot of steel, the most recycled material in the world. Let's keep making it here in the USA, the best and cleanest place in the world to make it.

Statement from Congresswoman Debbie Halvorson
House Small Business Committee
April 29, 2009

"Climate Change Solutions for Small Businesses and Family Farmers"

Thank you, Chairwoman Velazquez, for holding this hearing today on Climate Change Solutions for Small Business and Family Farmers.

As the debate on a climate change/carbon reduction bill continues in Congress, I would like to highlight the role agriculture plays within the framework of the conversation. I am a strong advocate of the agriculture industry, as it is not just a major industry within my district and Illinois, in general, but it is a way of life for many throughout the country. I am proud of the fact that McLean County, within my district, is the highest corn producer of any county in the United States, Additionally, I am proud of the fact that Illinois is the second highest corn producer, next to Iowa, and the number one soybeans producer. Illinois is the largest corn and soy exporter when it comes to international exportation. Interestingly, 80% of corn shipped through the Panama Canal comes from Illinois farms. I believe these are amazing facts considering the majority of Illinois farms are small business operations.

Additionally, I would like to reiterate my thanks to you for including agriculture within the topic of today's hearing. As you may know, the agriculture industry attributes 8% of the total direct emission greenhouse gas emissions, which is the lowest total emission percentage of any domestic industry. The emissions produced from agriculture primarily result from direct methane and nitrous oxide emissions from a variety of sources, including soil management practices.

There are many opportunities where those in the agriculture industry can make innovative strides in helping to minimize carbon emissions, as well as many opportunities for those in agriculture to participate in and benefit from a carbon reduction program, in whatever form may result from current pending legislation.

In carbon reduction programs that are currently being discussed, greenhouse gas emitters would have the option of investing in out-of-program projects to help offset its allowed amount of greenhouse gas emissions. The agriculture sector can play a significant role in helping to reduce domestic emissions through offsets. Examples of such agriculture projects include sequestration of carbon on agriculture and forested lands or reduction of emission from livestock through dietary improvements and manure management, just to highlight a few.

In regards to agriculture participating in offset programs, a concern that I have, as well as many others that are invested in agriculture practices, involves government regulation and oversight, particularly which agency would be able to best work with agriculture and

analyze the farming practices that would best sequester carbon as well as monitor their performance.

Many within the agriculture community believe USDA should quickly implement provisions of the recently enacted 2008 Farm Bill that directs them to develop guidelines and protocols related to farmer, rancher and forestland owner participation in greenhouse gas offsets markets. USDA has already developed a properly constructed science based model that includes statistically relevant random field measurements to help maximize agriculture's offset credits for carbon sequestration.

A second issue that I believe should be taken into account as this debate continues is the need for rewarding early action to those that have already been participating in beneficial, agricultural-based carbon reduction projects. For example, Jim and Pam Robbins from Peotone, Illinois in my District, have been using no-till farming practices in planting their soybeans for the last 28 years and strip tilling farming practices in planting corn in the last 8 years. Jim and Pam's efforts should not be disadvantaged for being early adaptors but recognized for the 1,000's of tons of carbon they have already sequestered before most people knew "greenhouse gases" were a problem. Ken Beck from Mendota, Illinois has been practicing minimum till since he started farming in the mid 1980's. A final example includes, Paul and Donna Jeschke from Mazon, Illinois who have practiced no-till in planting soybeans since the mid 1980's and conservation tillage with their corn for more than 30 years. These farmers have been on the forefront of carbon reduction and they should be acknowledged for their foresight.

Finally, I would just like to bring a couple other agriculture facts that many may be unaware, demonstrating how agriculture's improvements in efficiency have benefitted our efforts to address global climate change. For instance, American farmers have slashed the amount of fertilizer needed to grow a bushel of corn by 36 percent in just three decades. Additionally, corn farmers cut erosion by 44 percent in two decades by tilling the soil less. And, American farmers grow five times more corn than they did in the 1930's on 20 percent less land.

Madame Chairwoman, thank you once again for holding this important hearing. I look forward to hearing from today's witnesses and participating in this discussion.

Written Statement of Corey J. Connors
Director of Legislative Relations, American Nursery & Landscape Association
Submitted for the hearing record to the
House Committee on Small Business
U.S. House of Representatives

"Climate Change Solutions for Small Businesses and Family Farmers"

April 29, 2009

Chairwoman Velazquez, Ranking Member Graves, and members of the House Committee on Small Business, thank you for allowing me to submit written testimony for the hearing record on behalf of the American Nursery & Landscape Association (ANLA). Founded in 1876, ANLA is the national trade association of the vertically-integrated nursery and landscape, or "green" industry. ANLA represents the national interests of more than 20,000 firms, the vast majority considered small businesses, that grow nursery and greenhouse plants, sell lawn and garden plants and products, design/install/care for landscapes, and sell supplies to the industry. Typical members include growers, garden center retailers, horticultural distributors, landscape professionals, and suppliers to the industry. A number of firms are engaged in more than one of these operations.

The economic impact of the green industry on the U.S. economy is significant. According to a 2005 survey conducted by the University of Tennessee and the University of Florida, the vertically-integrated green industry had an estimated economic impact of $147.8 billion. In addition, the green industry employed 1.95 million individuals, generated $64.3 billion in labor income, and provided $6.9 billion in indirect business taxes. According to the USDA's 2007 Census of Agriculture, nursery, greenhouse and floriculture crop sales totaled $16.6 billion in 2007, up from $14.6 billion in 2002. Nursery and greenhouse crop production now ranks among the top five agricultural commodities in 28 states, and among the top 10 in all 50 states.

The Green Industry: Growing Climate Change Solutions, Literally

ANLA commends the Committee for its recognition of the important role that small businesses and family farms can play in reducing greenhouse gas emissions. As our country continues to make significant public and private investments into developing technologies to combat climate change while creating 21st century "green" jobs, the nursery and landscape industry takes great pride in having provided consumers with a low-cost, natural solution to this problem for the last 150 years!

The trees and landscape plant material that our industry produces, distributes, retails and installs mitigate the negative effects of an ecosystem disrupted by human activity and sprawl. They sequester carbon, provide oxygen, clean polluted air, filter storm water runoff and provide energy efficiency benefits that are quantifiable both in scientific metrics and in hard dollars. Once installed in our urban forest, in our residential and commercial landscapes,

alongside our nation's scenic highways and byways and on vegetative roofs, plants do not directly consume fossil fuels to provide benefits to the ecosystem and human health. As a structure, be it a road or a building, depreciates in value and its energy efficient components provide diminishing returns over time, the managed landscape surrounding that structure, trees and plants under continual care in public, commercial and residential settings, actually increases in monetary value and ecosystem service benefit over that same period of time.

As Congress considers a new approach to climate change policy and energy independence, this segment of American agriculture is proud to produce low-cost, natural and sustainable solutions (and jobs) that have an immediate and continuing return on investment. ANLA again thanks the committee for the opportunity to submit testimony for the hearing record and offers the following policy recommendations for your consideration.

Trees: A Natural Solution to Residential Energy Efficiency

A 1995 report by the U.S. Department of Energy (DoE) entitled, "Landscaping for Energy Efficiency" states that, "carefully positioned trees can save up to 25% of a household's energy consumption for heating and cooling." This research conducted by the National Renewable Energy Laboratory, which warranted the inclusion of "landscaping" into the DoE's "Consumer's Guide to Energy Efficiency and Renewable Energy," predicted that the proper placement of only three trees could save an American household up to $250 in energy costs annually, providing enough energy savings to return the investment in less than 8 years.

While American consumers are incentivized to purchase energy efficient appliances and building materials for new and existing homes through federal tax credits, similar incentives do not yet exist for energy-efficient landscaping. We believe that there is an opportunity to promote a low-cost, natural solution to energy efficiency that requires virtually no on-going energy consumption, which does not produce carbon emissions, and does not experience a sustained decline in efficiency or productivity over its life-cycle but rather provides increasing contribution over time. A solution that has a positive impact on the environment and has been demonstrated to increase the value of a home. The solution? Provide homeowners with an energy efficiency tax credit for planting a properly-sited, site-appropriate tree.

How Energy Savings Are Achieved

According to the U.S. Department of Energy, an eight-foot, deciduous shade tree costs about as much as an awning for one large window, and can ultimately save a household hundreds of dollars in reduced cooling costs, yet still admit winter sunshine to reduce heating and lighting costs. The "Landscaping for Energy Efficiency" report states that a well-planned landscape can reduce an unshaded home's summer air-conditioning costs by as much as 50%.

A 6-foot to 8-foot (1.8-meter to 2.4-meter) deciduous tree planted near a home will begin shading windows the first year. Depending on the species and the home, the tree will shade the

roof in 5–10 years. Shading an air conditioning unit can increase its efficiency by as much as 10%."

- During the summer, shading and evapotranspiration (the process by which a plant actively moves and releases water vapor) from trees can reduce surrounding air temperatures as much as 9 degrees Fahrenheit. Because cool air settles near the ground, air temperatures directly under trees can be as much as 25 degrees Fahrenheit cooler than air temperatures above nearby black top.

- In the winter, dense evergreen trees and shrubs can serve as a windbreak to lower the wind chill near a home. DoE, through its research, found that houses with windbreaks planted on the windward side averaged 25% less fuel consumption than similar, unprotected homes. One study in South Dakota found that windbreaks to the north, west and east of houses cut winter fuel consumption by 40%.

The Environmental Benefits of Tree Planting

The environmental benefits of a well managed landscape, and the ecosystems service benefits provided by trees in particular, are well documented. The environmental value of a single tree, in monetary terms, has been documented by the USDA Forest Service. USDA Forest Service Pamphlet #R1-92-100 states that "over a 50 year lifetime, a tree generates $31,250 of oxygen, provides $62,000 worth of air pollution control, recycles $37,500 worth of water and controls $31,250 worth of soil erosion."

Tree canopies and root systems provide a natural filter to our water supply and reduce storm water runoff, flooding and erosion. Tree foliage reduces particulate matter from the air, including dust, micro-sized metals and pollutants such as ozone, nitrogen oxides, ammonia and sulfur dioxides. Trees sequester carbon dioxide and produce oxygen. Combined with the cooling effect of trees, these processes can have a significant impact on reducing smog and over all air pollution. Every 40 trees remove 80 lbs. of air pollutants annually.

The "REAL" (Estate) Value of Trees

Real estate experts understand the benefits of landscaping in terms of enhancing "curb appeal" for a home that is for sale, and for good reason. In research conducted by the Gallup Organization, it was discovered that landscaping can add between 7% and 15% to the value of a home. Money Magazine has reported that landscaping can bring a recovery value of 100 to 200 percent at selling time. This is in comparison to kitchen remodeling, which brings a 75 to 125 percent recovery rate; bathroom remodeling, a 20 to 120 percent recovery rate; and addition of a swimming pool, a 20 to 50 percent recovery rate. Additional studies indicate that landscaping also speeds the sale of a home by four to six weeks.

As a part of the landscape, a mature tree itself has substantial monetary value for the homeowner. As was reported in REALTOR Magazine, Horticultural Asset Management, who

assesses the value of landscape plants, puts the worth of a healthy, 60-foot-tall European beech tree at $50,000. The USDA Forest Service's Center for Urban Forest Research has found that a single front yard tree is equal to a 1% increase in the sale price of a home.

Policy Recommendation

Directly incentivizing the American consumer to invest in energy-efficient landscaping has the dual benefit of educating the public about the environmental benefits of trees, while allowing a homeowner to realize substantial monetary benefits at the time a home is sold and cost-savings from increased energy efficiency. Meanwhile the neighborhood and community enjoy the environmental and public health benefit of planting a site-appropriate tree. Since the precedent for a tree planting tax credit has already been established for private landowners (Federal Reforestation Tax Credit), industry is comfortable recommending a tree planting tax credit for American homeowners, especially given consideration to the positive environmental and economic impact during the current economic crisis.

ANLA recommends amending current residential energy efficiency provisions in the tax code by providing a credit for planting a site-appropriate, properly sited tree at a homeowner's primary residence. We recommend that the costs for installation of a tree are included, so that the homeowner has the option of hiring a horticultural services professional to ensure that a tree is appropriately sited to ensure maximum energy efficiency benefits. Finally, ANLA recommends that only trees of a minimum height (established by the Department of Energy's research as between 6 and 8 feet for the purposes of shading, and a minimum of 3 feet tall for the purposes of providing a windbreak) are eligible, as research has proven that more mature trees will have an immediate impact on energy efficiency and a far greater chance of survival and sustainability than a seedling.

America's Small Businesses Benefit from Trees in More Ways than One

The ecosystems services provided by trees in the managed residential landscape translate well into a commercial setting. But science suggests that there are additional benefits to small businesses, specifically retailers, that go beyond energy savings, mitigating storm water runoff and pollution control. Research conducted by Dr. Kathy Wolf at the Center for Urban Horticulture at the University of Washington suggests that the aesthetic value of the managed landscape has a positive and significant influence not only on commercial land value, but also on product pricing, consumer patronage and commercial occupancy rates.

The research conducted by Dr. Wolf found that:

- Product prices, on average, were 11% higher for products in a well-landscaped retail district as compared to a retail area with no trees;
- Consumers rated the "amenity and comfort" of a tree-lined retail sidewalk approximately 80% higher than a non-shaded street;
- The tree-lined sidewalk had a 30% higher "quality of product" rating than the same products in retail districts with barren sidewalks;

- In a survey of one southern community, nearly three-quarters (74%) of respondents preferred to patronize commercial establishments whose structures and parking lots were beautified with trees and landscaping;
- One study examined the factors determining commercial occupancy rates and found that among 30 variables, landscape amenities had the highest correlation with occupancy, higher even than direct access to arterial routes.

Policy Recommendation

The impact of the economic downturn on America's small businesses has been well-documented and substantial. The effect of the economy has been "double-trouble" for small businesses, as depressed commercial real estate values soaring numbers of retail vacancies are coupled with a staggering drop in consumer confidence. America's small businesses would experience multiple benefits from funding an existing tree planting grant program within the Small Business Administration.

Public Law 101-515 directed the Administrator of the Small Business Administration (SBA) to create a national small business tree planting program (Title 15, Chapter 14A, § 651 of the U.S. Code) and authorized $15 million in appropriations for FY1991, and $30 million in annual appropriations for FY1992 through FY1997. While the program was a valuable tool for small businesses, who worked in collaboration with state and local governments on development plans to utilize the funding, SBA did not have the appropriate resources or capacity necessary to administer the program.

ANLA recommends that Congress restore funding for the national small business tree planting program at its FY1997 level of $30 million annually. Further, we recommend that the current statute be amended to allow the SBA to designate administrative duties to the USDA U.S. Forest Service, which has demonstrated capacity and experience in administering tree planting grant programs through the Office of Urban and Community Forestry, and through the National and Urban Community Forestry Advisory Council.

Conclusion

A federal investment in managed landscapes, or green infrastructure, as a component of public policy offers an array of benefits. The benefits provided by trees and landscape plants in combating climate change, from carbon sequestration and associated ecosystems benefits to enhancing energy efficiency and reducing an energy consumer's reliance on fossil fuels, are among the many reasons that federal policy should include investments in America's green infrastructure.[•] Investments in landscape systems will also yield visible and high returns in the form of employment, economic and social benefits, and will increase in monetary and environmental value over time.

Thank you for this opportunity to include this testimony into the hearing record.

May 5, 2009

U.S. House of Representatives
Committee on Small Business
ATTN: Mark M. Palmer, Counsel
2361 Rayburn House Office Building
Washington, DC 20515

SUBJECT: Written Comments for The House Committee on Small Business that held a hearing April 29, 2009, entitled "*Climate Change Solutions for Small Businesses and Family Farmers*."

COMMENTS

GENERAL: CHS Inc [1] is our nation's largest farmer-owned cooperative, and we appreciate the opportunity to provide comments on this extremely important topic to rural America. Among our business units that support rural communities and production agriculture, we own small petroleum refineries --one in Montana and majority owner of one in Kansas. We in association with 34 other **small business refiners (SBRs)** are the predominant providers of fuel to rural communities and agriculture.

Whereas many in Congress and agriculture look at the opportunities for farmers to gain some value under the cap and trade programs proposed in various greenhouse gas (GHG) legislation, **the costs of GHG legislation to farmers and rural America have been virtually ignored.** In fact, many believe that farmers could only be net winners under 'cap and trade'. We do not. And that is the focus of these comments.

[1] CHS Inc. (www.chsinc.com) is a diversified energy, grains and foods company committed to providing the essential resources that enrich lives around the world. A Fortune 200 company, CHS is owned by 350,000 farmers, ranchers and cooperatives, along with thousands of preferred stockholders across the United States. CHS supplies energy, crop nutrients, grain, livestock feed, food and food ingredients, along with business solutions including insurance, financial and risk management services. The company operates petroleum refineries/pipelines and manufactures, markets and distributes Cenex® brand refined fuels, lubricants, propane and renewable energy products. CHS is listed on the NASDAQ at CHSCP.

SPECIFICS: Under any cap and trade program, the manufacturers of agronomic and energy inputs needed for farmers to raise their crops and for agribusinesses to process farm commodities into food will have to pay for the added GHG costs they incur. Facilities which provide those inputs, such as petroleum refiners, fertilizer manufacturers and electricity generators, will have to buy GHG allowances and carbon credits to offset their own GHGs. Many of these type facilities are owned by large businesses. However, many, particularly those that are located in (and therefore provide local jobs for) rural areas and/or serve rural areas, are small business entities and/or are owned by farmers. Our comments highlight issues for SBRs and farmers.

Take petroleum refiners for example. There are many GHG issues for SBRs because of: (1) their location, (2) their ownership, (3) the GHG they are responsible for, (4) their role in the nation, (5) the costs to a SBR and (6) the negative impact on farmers.

Location: Of the 149 refineries in the United States, 35 are small business refiners (SBR)[2]. They provide about 13% of our nation's petroleum need, but most of the Midwest's needs. However, whereas the large refiners are along the coasts and near Chicago, almost all of the Midwest, Plains and Rocky Mountain states -- the United States bread basket -- are serviced almost exclusively by SBRs. This means that rural America and production agriculture are dependent on the continued profitable existence of those 35 SBRs for not only local fuel products, but also for local jobs. A review of the attached map, with the locations of small and large U.S. refiners, shows how SBRs predominate mid-America

Ownership: Mid America is dependent on the petroleum products provided by SBRs. Of the 35 SBRs, three refineries (located in Montana, Kansas and Indiana) are owned by farmers themselves. These three refineries are called refiner co-ops and together they provide about 60% of the fuel used by farmers and cooperatives in the United States. CHS is a refiner co-op. Any GHG costs it incurs must be passed on to its owners—its 350,000 famers and ranchers. Any GHG cost not passed on is a direct loss to farmer patronage. Either way, these farmers lose. In addition, many SBRs are almost single-business focused and lack business breadth and diversity

[2] Small business refiners are those defined under the American Jobs Creation Act of 2004 (found in the conference report 108-755 to the bill HR4520, page 527).

to mitigate high GHG costs. Many of the SBRs have only their refining platforms and none have crude oil reserves. Thus for many SBRs their income is derived mostly, if not only, from the profitable sale of petroleum products and not from crude oil which is often very high value. This makes SBRs very vulnerable to onerous GHG legislative and regulatory costs.

SBR GHG responsibilities: Unlike any of the other industrial sector facilities that will be covered under cap and trade legislation, petroleum refiners will have to account not only for their smokestack emissions, but also for the carbon dioxide equivalents in their products[3]. This is key for all refiners. Thus, refiners must account for the GHGs they emit from their smokestacks and the GHG within their gasoline, diesel, jet fuel, asphalt and pitch (used in shingles). Those petroleum products account for nearly 90% of all their GHGs for which refiners are responsible and under the currently proposed House climate change legislation will not count towards the calculation of free allowances. Such a high percentage of GHGs in fuels means they must pass the costs along to the consumers. Since SBRs are almost the sole providers of fuel to agriculture and rural communities that means those customers will see significant cost increases. Those cost increases come not only from increased fuel costs, but also within other inputs they use -- electricity and fertilizer to name two obvious ones.

Role of Small Business Refiners (SBR). Given this Committee hearing focused on small businesses (in addition to family farms), it is important that the House Committee on Small Business direct its attention to the SBRs themselves from an oversight responsibility. SBRs occupy a unique niche not only in the petroleum industry but also geographically. In repeated legislation and federal regulations, refiners in the Midwest have been given special recognition and help for the critical role they serve in geographic regions and because they are key players in the overall supply and distribution of petroleum products to rural areas. As major providers of off-road diesel for farmers, jet fuel for commercial and military aircraft, asphalt for road construction and pitch for shingles, they provide key elements to many sectors of the economy. Any increased GHG costs for these products must be passed on to the consumers. GHG costs

[3] Of the GHGs a refinery would be responsible for under a cap and trade system, about 10% would be from its smokestack emissions and about 90% from its petroleum products.

that cannot be passed on threaten their operation, maybe even their existence, and negatively impact rural areas by creating fuel shortages in areas where large refiners do not tend to operate.

Cost of GHGs in Fuels: Although CHS would urge the committee to look at other input costs to farmers such as from rural electric cooperatives and fertilizer production, we want to provide an example of only the GHG costs of fuel to a farmer-owned, refiner co-op, whose majority customers are farmers themselves. Although we would incur costs for the GHGs in both emissions and in fuels we produce, we looked at the costs of buying GHG allowances and carbon credits only for our fuel production.

In early July 2008, when carbon credits were trading in the European Union at $40/ton we did some analysis on the impact on CHS. Although the jet fuel, asphalt and pitch we make have GHGs, we ignored them in calculating our GHG costs. Instead, we determined GHG costs for gasoline and diesel only and calculated that it would cost CHS $683 million in year one of a cap and trade program! (See attached table). Although the actual trading cost was $40/ton this $40/ton was also the midrange figure that EPA used in its calculations of four pricing/cost scenarios of cap and trade. That $683 million to us translates into a 38 cents a gallon increase to consumers. Add to that the GHGs in other petroleum products like asphalt, jet fuel and pitch, and the smokestack emissions, and it would be closer to 50 cents per gallon. We would have to pass that on to the customer. If we included all petroleum products and smokestack emissions the GHG costs are higher than 50 cents. So as we pass along the $40/ton costs, what do farmers get as income from selling credits to help offset those costs? Not as much as some people believe.

Value of carbon sequestration credits for farmers. Although only a few U.S. companies have been paying for credits, some farmers have been selling carbon sequestration credits and earning income. Many of those farmers have been selling their credits through 57 credit aggregators. Two, the North Dakota Farmer's Union[i] and Iowa Farm Bureau[ii] have been active. How do their programs work? Although there are many details in contracting, in general they have certain commonalities. They buy credits by contract, most of which are for five years. They pay farmers not based on daily fluctuations but across a range and then fix the price as an average.

Payments to farmers are not lump sums but every six months. In 2008 they both averaged credits near $4.50 a credit.

Net back to farmers. What could be the financial impact on farmers? It is hard to calculate, but let's continue the example using the following data. Assume it takes just 2 acres to constitute a CO_2 ton; carbon credits trade at $40/ton; four gallons of diesel are used per acre at a GHG cost of 50 cents a gallon; and operations are counted twice annually--for planting and then harvesting in one year. A farmer would get some credit for each ton of CO_2 equivalent he agrees to sequester. That could mean he would have to put several acres under a GHG contract for each carbon ton for a few years or longer. He will get so many dollars per ton—based on our example of $40/ton final market price, it would be safe to assume that the farmer would get a lot less than $40/ ton per year. But we do not know for sure. From the results of the 2008 trading by the Iowa Farm Bureau and North Dakota Farmers Union, it appears farmers received payments in the June/July timeframe of about $4.50 average per credit.

As to costs, there are several in this example. There are the costs of an agronomist to certify CO_2 soil content and a middle-man for aggregating the credits. There are GHG fuel costs -- (50cents/gal) x (4 gal/acre) x (2 acres/operation) x (2 operations annually)—in this example of $8. Then add the GHG costs of the fertilizer plant which had to buy credits and the rural electric cooperative which had to buy GHG credits for making electricity which they pass along to the refiners, fertilizer producers, and farmers directly. Also, add the GHG costs of seed and crop protection inputs. Given the lag time between the time a farmer might buy a low-value carbon credit and when a refiner, fertilizer plant or electric co-op might buy a higher GHG allowance or carbon offset, the cost to the farmer might exceed the value of his sequestered carbon credit sold over the multi-year time frame of the carbon credit contract.

So in July 2008 when we did our company analysis of GHG costs, companies were paying $40/ ton while farmers were getting $4.50/ton. Unless there are changes in how the allowance/credit buying and selling occurs it appears that it is far from assured that farmers will be net winners.

SBR compliance cost. Farmers may not be net winners due to these high GHG costs from refiners. What about the SBRs themselves? Cap and trade proposals would have a significant negative impact on SBRs. SBRs would have to come up with the financing to participate in the mandatory allowance auctions and carbon credit trading requirements by the end of each year. Many of the SBRs are not in a financial position to get large enough 'lines of credit' to participate in these auctions/trading without significant help. The costs are too high. For example, the estimated costs of $683 million in the first year for CHS to comply equal all of our record profits in 1999-2003 combined. CHS would try to recoup those costs by passing them on to the consumer—in our case, mostly farmers and local cooperatives. If we and other SBRs tried to absorb some of the costs, that may put some SBR operations in jeopardy—not unlikely given the extremely slim margins refiners are experiencing today. But clearly help is needed for the SBRs.

Help for small business refiners. Since SBRs must address both smokestack emissions and fuel, we advocate several options: (1) eliminate the requirement that refiners account for the GHG in every fuel gallon each produces; (2) if that is rejected, replace the credit auction system for fuels under cap and trade with a 'carbon tax;' (3) provide financial incentives, free allowances and/or other assistance to small business refiners, especially refiner co-ops, to move towards compliance of smokestack emissions; and, (4) permit small business refiners the unlimited use of carbon sequestration credits.

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[i] As we are only slightly knowledgeable about the Iowa Farm Bureau (IFB) and North Dakota Farmer's Union (NDFU) programs the below information should be verified with them. But as we understand it, the IFB has developed a relationship with Agragate Climate Credits Corporation and they do all their trading on the Chicago Climate Exchange (CCX). This particular entity, Agragate holds 20% reserve until the carbon is sold. They pay out twice a year, every six months in July and December. The carbon credit is traded daily on the CCX; however their payout is an average of the total sales of their group. Also there is a 10% service fee accessed. The last pay out was done in July 08, that was for carbon that traded from Dec. 07 ranging from $1.65 to $7.50 in June 08 for a net average result of $4.63.

[ii] NDFU's Carbon Credit Program. They are largest ag, soil, biomass, and carbon aggregator and Agragate associated with IA FB is the second out of a total of approximately 57 in the U.S. Contracts run five future years, (currently their contracts are for 2009-2013). Each aggregator is required by CCX to hold 20% reserve, so NDFU registers 100% of the credits, but can only trade 80% till the end when verification is complete that all farmers completed their contract correctly. That is at least for ag, soil. biomass, and carbon contracts, might be different for others.

NDFU pays out annually once all credits in their selling pool have been sold. That can easily be a payment that farmers won't receive until much into the summer, so therefore they do receive the interest that the profit has made in the mean time as part of their net result after NDFU takes out the verification and registration to CCX that they front for all their participants at the beginning of each year. They also have a 10% service fee that is charged. They make no promise of a deadline to their farmers as when they their payment will come since it is based on the selling of their entire pool. Currently they have about eight that they trade out of right now.

Their payout is an average of the total sales and they don't have a limit on how many people can be in a pool it is based instead on signing up within the deadline at the prior to the beginning of each year (Jan 1). It appears that the 2007 payout was $3.75. It also appears that the 2008 payout was in mid $4 range

Written Statement of the
National Oilseed Processors Association
Submitted to the
Small Business Committee
House of Representatives
April 29, 2009

The National Oilseed Processors Association (NOPA) offers its thanks and appreciation to Chairwoman Velázquez, Congressman Moore and members of the Committee for holding this hearing ***"Climate Change Solutions for Small Businesses and Family Farmers."*** NOPA also thanks you for the opportunity to submit for the record NOPA's views regarding the potential impact of global climate change legislation and regulation on small businesses.

NOPA is a national trade association comprised of 15 companies engaged in the production of food, feed and renewable fuels from oilseeds, including soybeans. NOPA's 15 member companies process more than 1.7 billion bushels of oilseeds annually at 66 plants located throughout the country, including 61 plants which process soybeans. Each one of these 66 plants operates as a small business generating services and opportunities for farmers and ranchers in the rural communities they serve.

Climate Change is a Global Challenge

Climate change is a global challenge requiring multilateral solutions that do not shift the economics of agricultural production, processing and manufacture of food and feed products and renewable fuels. Rising energy costs commensurate with either a carbon tax or an emissions cap imposed on U.S. operations would threaten the viability of not only the energy-intensive, import/export-sensitive U.S. oilseed processing industry, but other sectors of manufacturing in the U.S., resulting in companies facing the decision to move operations out of the country. The result would be a transfer, not a reduction, of global greenhouse gases (GHG) emissions and jobs. In fact, the climate change problem could be exacerbated to the degree that those operations are transferred to countries that use energy sources that are more carbon intensive.

Hence, both legislation and regulation must ensure that developed and developing nations alike share responsibility for addressing climate change. Additionally, any emission reductions from such legislation and regulation must be verifiable and enforceable, particularly with respect to impacts on international trade.

NOPA opposes any unilateral climate-related legislation that calls for either a carbon tax or a mandatory cap on GHG emissions. We do not believe sufficient effort has been put towards the development of voluntary initiatives that provide the framework for effective, voluntary, pro-growth, technology-driven approaches to reduce energy use, and thereby achieve GHG reductions in an economically sound manner. We believe that global GHG emissions are best addressed through voluntary initiatives, as well as through increased research, development and deployment of innovative breakthrough technologies.

In the event Congress acts to limit GHG emissions, NOPA believes that a full review of the benefits and costs of carbon tax and cap-and-trade programs should be undertaken. NOPA and its members are focused on solutions that will continue to promote U.S. agriculture and the food, feed and renewable fuels industry. In a high-volume, low-margin business environment, domestic production can quickly move to foreign competitors, at the expense of U.S. production and jobs. If implemented in an aggressive or reckless manner, either a carbon cap-and-trade or carbon tax program would have disastrous economic consequences on the U.S. oilseed processing industry. It would result in higher food prices and would make the oilseed processing industry much less competitive on exports to other countries. The net effect would be the loss of jobs in the industry, reduced revenue for farmers and processors, as well as increased food prices for consumers.

NOPA Statement of Principles on Global Climate Change

(1) Climate change is a global challenge and requires a global solution; any U.S. action must require comparable action by developed and developing countries alike.

(a) Our industry is an import/export-sensitive one; our customers are import/export-sensitive as well; everything that we and they produce can be produced across the border or overseas.

(b) The global playing field must be level or the U.S. food, feed and renewable fuels industry will become non-competitive.

(c) Climate change is a global challenge that cannot be solved by any one nation acting unilaterally.

(d) Without multilateral action, jobs and emissions will simply shift across the border or overseas to countries that require few, if any, environmental protections, harming both the global environment (via "carbon leakage") and the U.S. economy.

(2) Voluntary initiatives should serve as the framework for effective, voluntary, pro-growth, technology-driven approaches to reducing energy use and achieving greenhouse gas emission reductions in an economically sound manner.

(a) The oilseed processing industry is an energy-intensive one, but emits comparatively small amounts of GHGs.

(b) The food industry as a whole contributes roughly less than 1 percent of domestic GHG emissions, and emissions from our segment of the industry are only a small fraction of that total.

(3) Global GHG emission reductions should not be addressed by mandates and bureaucracy, but rather by technology-driven initiatives where industry and government work together to provide funding for increased research, development and deployment of innovative breakthrough technologies.

(4) Greenhouse gas emission reductions must be workable, verifiable, enforceable, flexible, transparent and global in scope.

(1) The Clean Air Act is not a viable or reasonable vehicle to address a global challenge like climate change, because it was designed to address local, regional and national, not global, environmental quality.

(2) Any federal program should preempt all regional, state or other carbon reduction initiatives or, if necessary, harmonize these initiatives.

(3) Any program that encourages removing arable land from production could severely strain the ability of the food, feed and renewable fuel industry to meet worldwide demand.

(5) Any legislation must be consistent with WTO obligations; to do otherwise is to face almost certain retaliation from our trading partners.

Conclusion

Thank you for allowing NOPA to share its views on global climate change. Attached is a question-and-answer document more fully outlining NOPA's views regarding the potential impact of global climate change, legislation and regulation on the oilseed processing industry. We look forward to working with you and members of the Committee in addressing the challenges and opportunities facing small businesses across the country, but in particular rural businesses that serve domestic farmers and livestock and poultry producers.

Questions & Answers Re: the Potential Impact of Global Climate Change Legislation & Regulation on U.S. Oilseed Processors

Q1 Members of Congress have introduced numerous bills to address the wide spectrum of climate change issues. Do you think Congress should enact a program that uses a carbon cap-and-trade program?

A1 Having outlined some of our industry's concerns in pages 1-3 of this Statement, were Congress to move forward in designing a cap-and-trade program, NOPA would favor a program that:

(a) Provides for comprehensive legislation rather than EPA regulation under the Clean Air Act and preempts or, if necessary, harmonizes state, regional and federal climate initiatives;
(b) Provides maximum avenues to free allowances, a robust credit system and built-in flexibility;
(c) Is economy-wide in reach, rather than targeting a single sector for emissions reductions;
(d) Is inclusive of all six GHGs, not just CO2;
(e) Is global in scope, guarding against carbon and job "leakage," and compatible with WTO obligations/commitments;
(f) Is permissive of excess allowance carryover;
(g) Sets a ceiling and safety valve in the setting of the price for allowances;
(h) Recognizes voluntary actions taken to reduce GHG emissions prior to implementation of climate change policy;
(i) Ensures a level playing field with processors from countries with a less stringent or no GHG mitigation system; and
(j) Allows the granting of allowances for the implementation of Carbon Capture and Sequestration (CCS) projects and does not disqualify projects due to public/private participation.

Q2 If a cap-and-trade program is chosen, how should emission allowances be distributed? For example, should they be at no cost, auctioned, or a combination of both? How should Congress prioritize the distribution of available allowances? Should allowances for the agricultural and forestry sectors be allocated at no cost, if so, should there be a limit on the number of no-cost allowances?

A2 NOPA believes that, in consideration of the comparatively small amounts of GHGs the food, feed and renewable fuels industry emits and the import/export-sensitive and energy-sensitive nature of the business, the industry should receive necessary consideration to mitigate economic harm. In the event Congress elects to include the industry in a cap-and-trade program, credits should be made available and free allowances should be allocated to it, in recognition of the threat that such a program would pose to the viability of the industry. Over time, free allowances could be phased out if climate change costs

are harmonized globally on an industry-by-industry basis. We also support setting a ceiling and safety valve in the setting of the price for allowances.

Should Congress move down the path of including the agricultural sector in a cap-and-trade program, considerable thought should be given to program design. Of particular concern to NOPA would be the unintended and problematic consequences of such an inclusion, such as agricultural producers taking arable land out of production and selling it as offsets; or, large GHG emitters buying large tracts of arable land, taking it out of production, and converting it to rangeland or trees, towards using the converted land as offsets. Any program that would encourage the taking of more arable land out of production could severely strain the ability of the food, feed and renewable fuels industry to meet worldwide demand.

Q3 Should a cap-and-trade program or a carbon tax/fee program be linked to existing or emerging U.S. regional or other carbon reduction programs (i.e. RGGI or individual state programs)?

A3 NOPA opposes any unilateral climate-related legislation that calls for either a carbon tax or a mandatory cap on GHG emissions. In the event Congress acts to limit GHG emissions, NOPA supports federal preemption of all regional, state and other carbon reduction programs or, if necessary, the harmonization of these climate initiatives. Any legislation that allows regions, states and other entities to pursue their own program/approach will only lead to confusion, multiple sets of recordkeeping and additional expense, all of which would serve to undermine regulatory effectiveness, create investment uncertainty, and negatively impact U.S. competitiveness. The objective should be to avoid unnecessarily driving up compliance costs and making environmental goals more difficult to reach. To the degree these other climate initiatives remain, it is paramount they be harmonized with the federal program to eliminate the cost and chaos multiple independent systems would impose on the regulated sectors.

Q4 If a cap-and-trade program is established, should an existing government agency regulate it or should a new agency be created?

A4 Before creating a new agency to regulate any new program, Congress should first step back and look at which agencies have the history, experience and accountability in administering such programs. Addressing GHGs via a cap-and-trade program should not be about creating new government entities, but about maximizing use of existing departments and agencies to carry out and enforce the program. Any agency tasked with creating or regulating a cap-and-trade program must develop operating principles that are feasible, flexible, accountable, clear, and enforceable; provide for a transparent regulatory approach; allow entities impacted ample time to respond during a notice-and-comment period; and establish a methodology so that the program can be modified over time based on experience to ensure that it is periodically updated to meet new objectives and environmental issues that may arise.

The U.S. Environmental Protection Agency, which has a demonstrated history in addressing many emissions issues and experience in implementing and administering programs, such as the Acid Rain Program, that included an allowance trading system, should be given serious consideration for regulating any new cap-and-trade program with full consultation from USDA, DOE, USTR, DOT and the Department of State. This program should not be regulated under the Clean Air Act because it would create a conundrum of regulatory impossibilities.

Q5 If a derivatives or futures market in carbon reduction arises in the wake of the creation of a cap-and-trade program, should the Commodity Futures Trading Commission (CFTC) continue its role as the regulator of this derivative carbon market, or should there be a different regulator?

A5 If a derivatives or futures market in carbon reduction does arise through the creation of a cap-and-trade program, it should have proper oversight and funding and an experienced enforcement authority. As discussed above in the answer to question no. 4, every effort should be made to utilize existing government entities. Considering the CFTC's demonstrated history and experience in overseeing such a market, it should be the regulator under any new cap-and-trade program.

Q6 Currently, derivatives of energy-based commodities can be traded through: a) highly structured instruments on regulated, transparent futures markets accessible to anybody and anyone; b) flexible instruments on lightly regulated, transparent derivative markets accessible to only major market participants, or; c) flexible instruments on unregulated, opaque over-the-counter markets accessible only to major market participants.

Should derivatives markets in carbon reduction arising in the wake of the creation of a cap-and-trade program also be permitted to develop under similar options as for energy-based commodities?

A6 Yes, derivatives markets should be permitted to develop.

Q7 Will enactment of a unilateral carbon reduction program have negative impacts for the U.S. oilseed processing industry or populations whose welfare is of special interest to the agriculture community? Such groups could include: residents of rural areas; agricultural producers and forest landowners; or input, transportation, and processing sectors of agriculture and forest products.

A7 The U.S. oilseed processing industry is an energy-intensive one, but emits comparatively small amounts of greenhouse gases (GHGs); the food industry as a whole contributes roughly less than 1 percent of domestic GHG emissions, and emissions from our industry are only a small fraction of that total. Because our industry has a limited ability to pass costs on to consumers of our products, we are concerned with cost impacts, including energy price increases, to our industry.

The U.S. oilseed processing industry is very energy-intensive and subject to foreign competition. Rising energy costs commensurate with any carbon reduction program would threaten the viability of not only this industry, but other sectors of manufacturing in the U.S., resulting in companies moving more and more operations out of the country. The result would be a transfer, not a reduction, of global GHG emissions. GHG emissions would be exacerbated to the degree that those operations are transferred to countries that use energy sources that are more carbon intensive.

Enactment of a carbon reduction program could also have a significant impact on crop production, including operating costs and fixed costs. Production agriculture relies heavily on fertilizer, diesel fuel, gasoline, natural gas and LP gas for on-farm use; for the heating/drying of commodities; and for transportation of product from farm to point of sale (whether by truck, rail, barge or ship). The cost of all of these could rise dramatically as a result of rising energy costs commensurate with any carbon reduction program. All of these price increases have the potential to increase the price of food and feed products accordingly.

Q8 How might revenue generated under a carbon reduction program be best used to offset any negative impacts?

A8 Revenue would be best used in funding necessary investment and development in new technologies such as carbon capture and storage; implementing cost-containment measures; strengthening transportation infrastructure; and ensuring that domestic businesses, farmers and ranchers are not put at an undue competitive disadvantage in the global marketplace as a result of climate change policy. A carbon reduction program should not be allowed to generate revenue for the administering entity or for international programs.

Q9 Should businesses that are affected (either indirectly or directly) by higher overall costs due to a carbon reduction program receive transitional assistance?

A9 Yes. To remain viable and competitive, affected businesses must have access to free allowances and auction revenue to offset the costs of any carbon reduction program, such as meeting new compliance benchmarks; installing new equipment to mitigate GHGs; utilizing new carbon capture and storage technologies; and higher energy costs.

Q10 What role should public lands play in helping to sequester carbon and/or reduce greenhouse gas emissions?

A10 Use of public lands in helping to sequester carbon could serve to lessen the impact of any carbon reduction program on U.S. oilseed processing or other manufacturing operations. Additionally, there may be an opportunity for government and business to work together to identify opportunities for using such lands for renewable fuels production.

Q11 Should carbon prices be determined exclusively by market forces or should limits on carbon prices be established?

A11 Initially, it is critical that allowances be free or that a significant portion of allowances be distributed to capped entities and economically disadvantaged sectors for their use in offsetting economic impacts and funding research and development on carbon reduction technologies. Eventually, these free allowances could be phased out if climate change costs are harmonized globally on an industry-by-industry basis. We support setting a ceiling and safety valve in the setting of the price for allowances.

Q12 The administration and implementation of an offset or allowance program will be a major topic during any potential climate change discussion. How should Congress prioritize the distribution of available offsets (who gets them and how much)?

A12 Offsets should be available to businesses most heavily impacted by any carbon reduction program, including businesses most disadvantaged in the global marketplace as a result of the program. We support a transparent process vetted through the public comment process that defines the source of the offsets and the size of the offset pool.

Q13 Should Congress be concerned about any unintended consequences resulting from a unilateral GHG reduction program?

A13 Carbon leakage occurs when there is an increase of GHG emissions in one country as a result of an emissions reduction by a second country with a stricter climate policy. One of the ways carbon leakage can occur is if the emissions policy of a particular country raises local production costs. In that case, another country with a more relaxed policy might have a trading advantage. If demand for the goods being produced remains the same, production may move out of the country to the country with a more relaxed policy; global emissions may not be reduced, but could actually increase to the degree that production is transferred to a country that uses energy sources that are more carbon intensive.

Q14 *Should Congress be concerned about any adverse impacts upon the US agribusiness industries resulting from a unilateral GHG reduction program?*

A14 Two of the largest U.S. customers of the U.S. oilseed processing industry are the domestic livestock and poultry industries. These industries consume over 45 percent of domestic soybean production in the form of soybean meal produced by the U.S. oilseed processing industry. A U.S. carbon reduction program would have a dramatic cost impact on food production from farm to fork, including the livestock and poultry industries, and would likely lead to carbon leakage to other countries with no carbon reduction programs.

A case in point is Brazil and Argentina, which are home to the principal competitors of both the U.S. oilseed processing industry and the U.S. livestock and poultry industries. Both of these countries have the capacity to expand not only crop production and processing, but livestock and poultry production; neither has a meaningful carbon

reduction program. Should a U.S. carbon reduction program increase costs on U.S. oilseed processors and U.S. livestock and poultry producers/processors to the degree that they lose their competitive advantage relative to Brazil and Argentina, all three industries, which are import/export-sensitive, will be forced to seriously consider moving out of the U.S. Brazil and Argentina will be the likely beneficiaries. Any U.S. carbon reduction program must be structured in a manner to protect our competitive advantage, recognizing that our competitors likely do not have similar policies in place.

Q15 Should Congress be concerned about provoking any adverse international reactions resulting from a unilateral GHG reduction program?

A15 Structuring a program in this manner will be a huge challenge, considering our World Trade Organization (WTO) commitments. Any U.S. carbon reduction program could lead to allocation schemes and trade mechanisms that could face WTO challenges that are already very complex. Designing a program/scheme to address leakage without risking retaliation from our overseas customers will be a very difficult task.

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"Connecting Cows, Cooperatives, Capitol Hill, and Consumers"

May 5, 2009

Chairwoman Nydia Velázquez
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515

Dear Chairwoman Velázquez,

Thank you for holding the hearing *"Climate Change Solutions for Small Businesses and Family Farmers."* Dairy farmers across the country are carefully looking at the role climate change legislation will play on their operations.

The National Milk Producers Federation develops and carries out policies that advance the well being of dairy producers and the cooperatives they own. The members of NMPF's 31 cooperatives produce the majority of the U.S. milk supply, making NMPF the voice of more than 40,000 dairy producers on Capitol Hill and with government agencies.

As you are well aware, dairy producers, along with many other agriculture producers, are price takers and unable to pass along increases in transportation, fuel and other input costs. While the implications of climate change legislation on the future of dairy operations across the nation are unclear, the dairy industry does see a potential opportunity in a carefully crafted cap-and-trade program.

Agriculture must not be a capped industry or regulated under climate change legislation. Agriculture and, in particular, the dairy industry believes it has already made great strides in improving efficiency and reducing our carbon footprint over a period of years. Total U.S. dairy farm-generated greenhouse gas(GHG) emissions were reduced by about 32% between 1944 and 2007, while milk production was up close to 60%. During that same time GHG emissions per dairy cow dropped by almost 66% according to a recent study by Cornell University. [Increased Production Reduces the Dairy Industry's Environmental Impact." Proceedings of the Cornell Nutrition Conference for Feed Manufacturers. October, 2008.] In addition, the industry has also made a commitment to reduce our carbon footprint across the entire milk value chain. NMPF, along with dairy processors, manufacturers, suppliers and retailers joined together to form the Innovation Center for U.S Dairy with a goal of creating business value and reducing greenhouse gas emissions through innovation and widespread adoption of best practices

throughout the dairy supply chain. The dairy industry is moving forward to improve our environment while keeping dairy producers profitable

When and if climate change legislation is enacted, a number of key issues must be addressed if a successful cap-and-trade program is to be developed. Two of the many key pieces that are critical to the dairy industry are the role of USDA and methane digesters. We insist on a major role for the U.S. Department of Agriculture, USDA, in setting the protocols and administering the agriculture offsets program. USDA already has laid the ground work needed to implement such a program though their extensive network of farm and producer contacts in every county across the U.S. It would be a step in the wrong direction to try to recreate this system through another agency.

Second, all methane digesters built after 2001 should be eligible to participate in the offsets program. There are currently less than 100 digesters across the 60,000 dairy farms in the U.S. Digesters provide a unique contribution to the GHG reduction goal. All digesters, regardless of when they were installed, are destroying new and additional methane permanently. This technology allows for full measurement and verification of the methane being removed. In addition to the GHG benefits, there are also water quality benefits and there is significant odor control. Since there are so few people that are able to take on the significant financial investment in methane digester, these leaders of the industry should be able to participate in an offset program going forward.

Along with digesters being eligible, there are many other proven technologies that should be included in a positive offset list. This would ensure that businesses can start planning for the future of a GHG reduction regime and begin investing now in those proven technologies.

As we stated before, there are several other pieces that will dramatically impact the final outcome of climate change legislation. NMPF is actively engaged with others in the producer community to make sure that any cap-and-trade program will include win-win initiatives which will benefit both the environment and agricultural producers.

Again, thank you for your commitment to the small business community and including agriculture in your discussion of climate change. We look forward to working with you on this important issue.

Sincerely,

Jerry Kozak

Jerry Kozak
President & CEO
National Milk Producers Federation

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