

GROWING THE CLEAN ENERGY ECONOMY

HEARING

BEFORE THE

SUBCOMMITTEE ON RURAL DEVELOPMENT, AGRICULTURE, TRADE, AND ENTREPRENEURSHIP

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Questions for the Record:	
None.	
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None.	
Additional Material for the Record:	
None.	

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TUESDAY, SEPTEMBER 10, 2019

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON RURAL DEVELOPMENT,
AGRICULTURE, TRADE, AND ENTREPRENEURSHIP,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:02 [a.m.], in Room 2360, Rayburn House Office Building, Hon. Abby Finkenauer [chairwoman of the Subcommittee] presiding.

Present: Representatives Finkenauer, Golden, Craig, Kelly, Hagedorn, Burchett, and Joyce.

Chairwoman FINKENAUER. Good morning. The Subcommittee will come to order.

And I just first want to say thank you, thank you, thank you to all of our witnesses who came here, traveled some long distances to get here, and it means a lot that you all took time out of your days to be here and join us here in Congress.

I also want to say welcome back to the Committee members here. We are excited to jump back in and starting with a really important hearing here today.

You know, as the Congresswoman from Iowa's First Congressional District, I know how important it is that we invest in clean energy and renewable fuels and how important those are to our economy and our environment.

As the sector continues to grow and become a driving force in the global economy, businesses large and small are looking to take advantage of these new opportunities. By reducing emissions, supporting renewable energy, and increasing energy efficiency, we can reduce our environmental footprint and continue to create millions of high-skilled jobs.

Small businesses play a vital role in the clean energy economy, from our farmers growing corn and soybeans for biofuels, to our manufacturers creating parts for wind turbines, to our utility workers and workers installing energy efficiency equipment. Nearly every State has seen an increase in clean energy jobs.

The sector now employs more than 3.2 million people, outnumbering jobs in fossil fuels almost 3 to 1. These jobs are in a wide range of industries, many of which have had a large presence of small firms.

Through innovation and hard work, many small businesses are bringing clean energy technologies to market, creating economic growth and supporting communities across the country. Even large

scale projects, such as wind farms and solar arrays, create jobs and opportunities for these smaller firms.

Moving forward, we need to make sure that we are supporting also our skilled workers, along with building trades and other union apprenticeship programs which these growing industries rely on to meet their workforce needs. Metal workers, machinists, and truck drivers are among the Americans helping create a more efficient and reliable clean energy future for our country.

The clean energy economy has had an especially beneficial impact on small towns and rural areas. Rural communities in the Midwest, in States like Iowa, have experienced notable growth in renewable energy. These industries are proven job creators, adding more than 8,000 new jobs in 2016.

This hearing will explore the challenges and opportunities to advancing energy efficiency and renewable energy technologies and identify what Congress can do to support the small businesses and skilled workforce that are the backbone of the clean energy economy.

Being from Iowa, the topic of the hearing has obviously some very special importance to me. Our State is a leader in clean and renewable energy thanks to our strong agricultural industry, investments in wind and solar energy, and strong support from both the public and private sectors.

Over a third of the energy generated in Iowa, over 36 percent comes from wind. That is more wind energy than any other State, and I do happen to know wind energy does not cause cancer. And sadly, I jokingly say that, but unfortunately we need to say that. You know, I know that is something that the administration and our President has talked about. And it is not true. The facts are that wind energy is good for our communities and good for the environment and something that we should be respecting and supporting, not making fun of or creating false—false lies about.

We also lead the Nation in the production of biofuels, with 4.35 billion gallons of ethanol production and 365 million gallons of biodiesel production in 2018, renewable fuels make a significant contribution to the Iowa economy.

Biofuels support 48,000 jobs in Iowa and have become a critical domestic market for corn and soybeans. However, our renewable fuel sector is facing hard times, which makes this hearing especially timely. Uncertainty surrounding some of the Federal policies and incentives that the biofuels industry has come to rely on has thrown its future and the future of my neighbors and Iowa farmers into jeopardy.

This administration's unprecedented use of small refinery waivers have undercut the renewable fuel standard. The approval of these 85 waivers have killed demand for roughly 1.4 billion bushels of corn and are an economic blow to farmers like my own sister and brother-in-law who are already facing the devastating effects of the prolonged trade war.

I am currently working with my colleagues on both sides of the aisle to call for a Federal investigation of the secretive exemption process for small refineries, but the question is whether relief will come soon enough for the biofuels industry.

Even some of the biggest companies like ADM have seen profits drop by roughly 40 percent, and others have been forced to cut production or stop altogether. And this was happening even before the administration granted the additional 31 small refinery waivers for 2018.

The expiration of the biodiesel tax credit has also created a huge challenge. This credit has been effective in helping the biodiesel industry develop and compete with the well-established fossil fuel industry. Biodiesel now supports 60,000 jobs and generates more than 11 billion in economic activity annually.

Producers are now struggling to survive without the credit. Already at least eight biodiesel plants have shut down this year. Another three or four may close before the end of the month if this credit is not extended.

For months now, I have been working hard on bipartisan legislation to renew the biodiesel tax credit. Iowa jobs are quite literally on the line, and we must act now to support and extend these tax credits.

While pleased, obviously, that the Ways and Means has marked up a tax credit extender package that includes a 3-year extension of the tax credit, I will continue to call on the House and Senate leadership to please work together and extend the credit immediately.

The renewable fuels industry, like our other renewable energy producers, have fought hard for a seat at the table and are an integral part of the clean energy economy. We are fortunate to have a biodiesel producer actually from Iowa here today to discuss some of the challenges facing the industry.

And with that, I again just want to thank you all for taking the time out of your busy schedules to be here, and I really look forward to our conversation. I hope we all leave here today with a deeper understanding of the future of clean energy and how to better support our small businesses and our workers in these sectors.

I also want to take a moment too to thank Ranking Member Dr. Joyce who is here with us today and would now like to yield to Ranking Member Dr. Joyce for his opening statement.

Mr. JOYCE. Thank you, Madam Chairwoman.

And thank you for addressing such an important issue, within hours of us coming back to Washington, addressing preparation for growing the energy economy, the clean energy economy, which is so important to us.

Today, our Subcommittee will examine the economic opportunities, the challenges, and the clearcut benefits that clean energy presents to small businesses across our country.

My home State of Pennsylvania has an extensive history of supplying the Nation with reliable energy. As technology has advanced, our methods have evolved. However, throughout these changes, Pennsylvania has been able to maintain its position as a national leader in the energy economy.

Thanks to the vast amounts of natural resources, Pennsylvania maintains its position as the second largest net supplier of energy to all other states.

In recent years, we have made impressive advancements to minimize the environmental impact of our energy production. Pennsyl-

vania is home to more than 700 active wind turbines, many of which you will find within my district, the 13th District. We rank second in the Nation in nuclear power generating capacity, and we continue to see that Pennsylvania's private businesses expand their use of solar energy.

Pennsylvania is second only to Texas in expanding natural gas reserves, which have more than tripled from 2011 to 2017. And thanks to the development in the Marcellus Shale industry, that has successfully occurred.

The development of natural gas in Pennsylvania not only is expanding economic opportunities, but it is also helping to drive declining CO2 emissions in the U.S. power sector.

According to the EPA, aggregate national emissions of the six common pollutants alone dropped an average of 73 percent from 1970 to 2017, while the gross domestic product grew by over 300 percent. The emissions reductions have led to dramatic improvements in the quality of the air that we breathe. Between 1990 and 2017, national concentrations of air pollutants improved 80 percent for lead, 77 percent for carbon monoxide, 88 percent for sulfur dioxide, 56 percent for nitrogen dioxide, and 22 percent for ozone.

As a physician, I understand the importance of clean air for the health of all Americans. And at the same time, we must be careful to balance our desire to reduce emissions with common sense, reasonable reforms that remove regulatory barriers, and allow the free market to drive our solutions. We must be practical about where we are as a Nation and what we can accomplish together to develop cleaner energy supplies.

As we focus on transitioning our energy supply to more renewable solutions, we cannot simply abandon traditional methods, but rather, must encourage innovation to attract and harness private capital to help accelerate deployment of future clean technologies. An all-of-the-above approach is the only way to ensure that Americans have access to affordable, reliable energy.

Today, the witnesses will discuss their experiences in the clean energy economy and give us insight in what works best for ensuring that America has a reliable and secure energy portfolio.

It is clearly a privilege to welcome my fellow Pennsylvanian and Penn State alumnus Dave Spigelmyer as one of our witnesses, who will share a firsthand account of the important role of natural gas in central and western Pennsylvania.

I look forward to learning from each and every one of you today and having a productive discussion on this very important issue.

With that, Madam Chairwoman, I yield back.

Chairwoman FINKENAUER. Thank you, Dr. Joyce.

The gentleman yields back.

And if Subcommittee members have an opening statement prepared, we would ask that they be submitted for the record.

I would again just like to take a minute to explain the timing rules here as we move forward. So each witness gets 5 minutes to testify, and the members get 5 minutes for questioning. There is a lighting system right in front of you to assist you. The green light will be on when you begin, and then the yellow light comes on when you have 1 minute remaining. The red light comes on when

you are out of time, and we ask that you stay within the timeframe to the best of your ability.

I would now like to introduce our witnesses.

Our first witness is Dr. Lynn Abramson. She is the president of the Clean Energy Business Network, the small business voice for the clean energy economy, representing over 3,000 businesses in all 50 States and across a diverse suite of technologies and services in energy efficiency, renewable energy, natural gas, and other advanced energy and transportation sectors.

Dr. Abramson has earned a BA in biology from Boston University, and a Ph.D. in marine atmospheric sciences from Stony Brook University, where her research on carbon cycle processes spurred her interest in advancing low carbon energy solutions.

Thank you for joining us today, Dr. Abramson.

Our next witness is Mr. Thomas Brooks, who is the general manager of Western Dubuque Biodiesel—I know you as Tom—a 30 million gallon production facility located in Farley, Iowa.

Mr. Brooks is the son of a Kentucky row crop and livestock farmer. When starting his education, Mr. Brooks' first field of study was actually ministry. Mr. Brooks then later attended Texas A&M to study aerospace engineering. He is also an active member of the Corps of Cadets and was commissioned a second lieutenant in the U.S. Air Force in 1984 as an air weapons officer with a degree in sciences.

Mr. Brooks has had more than 20 years of experience in his field, specifically refinement and value adding of animal fats and oil. He serves on the Iowa Biodiesel Board, the Iowa Renewable Fuels Association, and the National Biodiesel Board. He is a very busy guy.

Mr. Brooks, thank you for your service and thank you for coming from all the way from Iowa and spending 5 hours in the Chicago airport to join us.

Our third witness today is Mr. Michael Williams, the deputy director of the BlueGreen Alliance, an organization that unites America's largest labor unions with influential environmental organizations to solve environmental challenges in ways that create and maintain quality jobs and build a stronger economy.

Mr. Williams oversees the development of the organization's policy and legislative agenda as well as the organization's revenue and fundraising efforts. He has an extensive background on issues related to climate change, clean energy, infrastructure—one of my favorites—and procurement policies, including overseeing the launch of BGA's landmark policy initiative, Buy Clean, a first of its kind policy that was signed into law in California in 2017.

Mr. Williams, thank you so much for being here.

I now yield to Ranking Member Dr. Joyce to introduce our time witness today.

Mr. JOYCE. Thank you, Madam Chairwoman, again.

Our fourth witness today is David Spigelmyer, president of the Pittsburgh, Pennsylvania-based Marcellus Shale Coalition, or MSC, the region's largest shale development trade association.

Mr. Spigelmyer was instrumental in the founding of the MSC in 2008 and has served as the organization's Chair, Vice Chair, and as lead on its legislative committee.

The Marcellus Shale Coalition, with supply chain partners in the Appalachian Basin and across the country, address issues regarding the production of clean, job-creating American natural gas from the Marcellus and the Utica Shale plays. One of its guiding principles is to implement state-of-the-art environmental protection across all of its operations.

I am grateful to have Mr. Spigelmyer here with us today to highlight the benefits and economic opportunities that clean natural gas provides.

Mr. Spigelmyer is a native of Clearfield County, DuBois, and a Penn State alum, as in “We Are.” He now lives in the southwestern Pennsylvania area with his wife and two children.

I thank him as well for traveling to be with us today, and I am looking forward to hearing his expert insights about clean natural gas.

Thank you, Madam Chair.

Chairwoman FINKENAUER. Thank you, Dr. Joyce. The gentleman yields back.

And, Dr. Abramson, you are recognized now for 5 minutes.

STATEMENTS OF LYNN ABRAMSON, PRESIDENT, CLEAN ENERGY BUSINESS NETWORK, WASHINGTON, DC; THOMAS R. BROOKS, GENERAL MANAGER, WESTERN DUBUQUE BIODIESEL, FARLEY, IA; MICHAEL G. WILLIAMS, DEPUTY DIRECTOR, BLUEGREEN ALLIANCE, WASHINGTON, DC; AND DAVID J. SPIGELMYER, PRESIDENT, MARCELLUS SHALE COALITION (MSC), PITTSBURGH, PA

STATEMENT OF LYNN ABRAMSON

Ms. ABRAMSON. Chairwoman Finkenauer, Ranking Member Joyce, and members of the Subcommittee, thank you so much for the opportunity to testify today on the topic of growing the clean energy economy.

My name is Lynn Abramson, and I am president of the Clean Energy Business Network, which serves as the small business voice for the clean energy economy. Our network of more than 3,000 small and mid-size business leaders across the country spans all 50 States, including at least 31 professionals in the congressional districts that are represented by members of the Subcommittee.

My remarks today will focus on growth—the growth of the clean energy economy as a whole, the growth opportunity that small businesses represent, and the vision for how policymakers can help business leaders deliver on that growth potential.

Renewable energy, energy efficiency, and natural gas represent the growth sectors of the U.S. energy economy. According to data from the 2019 Sustainable Energy in America Fact Book, these clean energy sectors now employ 3.4 million American workers and supply more than half our Nation’s electricity. And this growing industry is not only powered by tech giants in Silicon Valley but also by the neighbors we run into at the grocery store and PTA meetings—people like Bio Joe and Beth Renwick, the founders of Green Energy Biofuel in South Carolina.

More than a decade ago, the couple tried making biodiesel in their garage to save money on gas. They have since turned their

experiment into a successful business with two production centers, regional distribution, and several dozen local jobs that can't be outsourced.

In 2017, CEBN surveyed our members on their business needs and priorities. We asked what were the most significant challenges facing their businesses, and policy topped the list of responses, particularly the need for more stable predictable policies.

It is very difficult for Fortune 500 companies, let alone small businesses, to build long-term infrastructure when the ground is constantly shifting beneath their feet.

My written testimony outlines detailed policy recommendations, relevant business case studies, and provides links to letters from hundreds of small businesses. But in brief, here are some of the most important ways Congress can accelerate the growth of the clean energy economy and the small business opportunities within it.

First, reinstate and extend expired clean energy tax incentives and clarify that energy storage and waste heat-to-power qualify for the section 48 investment tax credit.

Second, provide robust funding in fiscal year 2020 for the Department of Energy overall and key research development and commercialization programs within the agency. I will note that the congressional districts represented by members of this Subcommittee have attracted more than \$1 billion in DOE grants over the past 5 years.

Third—across all Federal programs relating to infrastructure, such as the farm bill, disaster recovery legislation, transportation bills—promote the adoption of clean, readily available technologies that will improve energy reliability, security, and flexibility.

And finally, establish stable, predictable energy policy goals that encourage market-based approaches and allow businesses to innovate and compete to offer the most effective affordable solutions.

There is nothing more fundamentally American than a small business owner setting out to build a company. We are a Nation that believes that any challenge can be overcome with sufficient ingenuity and grit and that anyone can rise to success with a good idea and enough dedication. But the right opportunities need to exist. We need lawmakers to stand beside our Nation's small businesses and provide the opportunity to compete and grow in the U.S. clean energy economy.

Thank you again for offering me the opportunity to testify, and I look forward to addressing your questions.

Chairwoman FINKENAUER. Thank you, Dr. Abramson.

And now I would like to recognize Mr. Brooks for 5 minutes.

STATEMENT OF THOMAS R. BROOKS

Mr. BROOKS. Good morning, Chairwoman Finkenauer, Ranking Member Joyce, and members of the Committee. Thank you for inviting me to testify today. Thank you for considering the biodiesel industry as an important component of the clean energy economy.

Small biodiesel producers are here today delivering clean energy and economic development. Biodiesel producers can be a giant driver of economic opportunity in rural communities. All we need to

continue delivering these benefits now and for the future is stable policy.

My name is Tom Brooks. I am the general manager of Western Dubuque Biodiesel, a small business in Farley, Iowa. Western Dubuque was formed by a group of eastern Iowa farmers and local business people. In June of 2006, we raised capital from 557 investors, all whom live within 45 miles of the facility. The investment was a significant opportunity for a town of 1,500 people.

Today, Western Dubuque employs 24 workers at the plant plus 28 contract drivers, for a combined payroll of \$3.7 million. We purchase feedstocks, soybean oil, and catalysts from local suppliers, again adding value to the State's economy.

The employment and economic opportunities are only part of how we support the local community. Western Dubuque pays more than \$200,000 in taxes to the city of Farley each year. Additionally, we paid into the city's new water tower fund and the local Western Dubuque school expansion. I feel it is fair to say that the town would not be able to afford the new water tower and the school expansion without our company and its contributions. Our small business is a large economic presence in our small community. Moreover, we are delivering clean energy right now, today.

Strong consistent Federal policy is needed to ensure continued success. Congress created the renewable fuel standard and the biodiesel tax incentive with the intent to reduce the transportation sector's carbon emissions and build a rural economy.

Without question, the policies are succeeding. When the incentives were first implemented in 2005, the U.S. produced nearly 112 million gallons of biodiesel. Now that market has climbed to 2.9 billion gallons in 2017.

Nationwide, the biodiesel industry supports more than 65,000 jobs, \$11 billion in economic impact. In many rural areas of the country, biodiesel plants are the driving force of that local economy, supporting employment for plant operators, truck drivers, and farmers.

Grain farmers receive better value for their soybeans thanks to biodiesel. U.S. biodiesel production uses the surplus oil from soybean crushing, adding 63 cents to the value of every bushel of beans grown by the farmer. By boosting the value of surplus soybean oil, biodiesel lowers the price of soybean mill for poultry and livestock producers, thereby reducing our costs when we purchase meats. Informa Economics estimates livestock producers pay \$21 less per ton for soybean meal due to increased biodiesel production and its use.

Stable, forward-looking tax policy, combined with market signals from the RFS, can help the biodiesel industry continue to stimulate economic growth, but right now policies are not stable.

At the beginning of this year, biodiesel producers were being forced to put projects on hold, reduce investments due to uncertainty about the renewal of the tax incentive and the growing number of small refinery exemptions being handed out by the EPA. Now, 9 months later in the year, we have seen half a dozen plants announce shutdowns, with more than 200 million gallons of capacity impacted.

It is ironic that the EPA has such concern for the economic hardships facing small refineries. The exemptions the agency is granting to each refinery that asks are simply shifting the hardship to even smaller bio producers, small businesses like mine.

I want to again thank Chairwoman Finkenauer for taking action to investigate EPA's refinery exemptions which are a severe threat to the clean energy economy in the rural communities. The economic misfortune for biodiesel producers flows through local rural economies. It impacts feedstock purchases, farm equipment purchases, and in savings and investments to the rural community.

While a long-term extension would provide necessary policy certainty, our industry urgently needs immediate extension of the biodiesel tax incentive for 2018 and 2019, at least, to help end the current climate of uncertainty that clouds our industry.

I want to thank once again, Chairwoman Finkenauer for her leadership and fighting to renew that credit.

I would like to emphasize that there are successful policies in place to support clean energy and jobs at home, primarily through small businesses like mine. That progress, however, is in jeopardy without quick reinstatement of the biodiesel tax incentive and stable RFS policy over the long term.

Thank you for the opportunity to submit my testimony.

Chairwoman FINKENAUER. Thank you, Mr. Brooks. I appreciate it.

And I would now like to recognize Mr. Williams for 5 minutes.

STATEMENT OF MICHAEL G. WILLIAMS

Mr. WILLIAMS. Thank you, Chairwoman Finkenauer, Ranking Member Dr. Joyce, and distinguished members of the Subcommittee. My name is Mike Williams. I am with the BlueGreen Alliance. Thank you for convening this hearing today regarding the opportunities that the clean energy economy can provide.

Small businesses are critical to our economy, and a major expansion of clean energy is vital if we are going to succeed in the fight against climate change. It is time we brought this thinking together, and in doing so, we must strive to do it right and lift up American workers.

Chairwoman, as you noted, the BlueGreen Alliance unites America's largest and most influential labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fair economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment. We can and we must have both.

Many solutions are already being put into place across the country. Tradespeople built the Block Island offshore wind project off the coast of Rhode Island. Auto workers are on the factory floors building cleaner cars and trucks in Michigan. Previously unemployed workers in St. Louis and Los Angeles are gaining access to high-skilled jobs and energy efficiency retrofitting, pipefitting, and transit manufacturing, while companies across the country are manufacturing methane mitigation technologies. These are all good jobs building a clean energy and climate-resilient economy today,

and many of these industries provide key opportunities for small businesses.

Let's take two examples. First, the methane mitigation industry. Methane is an incredibly potent gas that is the second largest contributor to climate change. Reducing methane emissions can reap economic benefits for workers, businesses, and communities across the country. Our research has found that the adoption of technologies and practices to reduce methane at new and modified oil and gas facilities would create over 50,000 jobs over the first decade of full implementation. Many of these jobs would be in the methane leak detection and repair industry.

Research has found over 130 companies, with customers in almost every State in this growing field. More than one-third of these businesses were founded within the last 6 years, and the majority of them are small businesses. And these are good jobs. The median hourly wage for the industry is \$30.88 compared to \$19.60 for all U.S. jobs.

Second, companies across the country are manufacturing and providing services to improve the energy efficiency of our Nation's housing and building stock and industrial facilities. Energy efficiency improvements support existing jobs, increase the quality of jobs created, and reduce pollution. Local communities can also capture the benefits of energy efficiency retrofits, including lower utility bills, improved tenant health, and increased economic development.

Small businesses are not only creating the jobs to do this work, but can also reap these same costs in environmental health benefits if they make energy efficiency updates themselves. There are currently over 2.3 million jobs in the energy efficiency sector, and roughly 70 percent of these are in small businesses.

Furthermore, identifying the supply chain and moving policies to increase domestic manufacturing of energy efficiency retrofit products can also help to create quality manufacturing jobs. Our research has found roughly 4,500 local manufacturing facilities in nearly every State across the country doing just this.

In New York, for example, Flower City Habitat for Humanity builds affordable housing for communities in Rochester. Through a commitment to in-state sourcing with 95 percent of parts coming from New York manufacturers, Flower City Habitat will be using windows and doors that exceed Energy Star standards at an affordable price. Many of these New York-based suppliers are IUE-CWA represented, supporting quality jobs and local businesses in these communities while reducing emissions.

These kinds of opportunities are exactly what we should be prioritizing to revitalize American manufacturing, protect the environment, and create quality jobs across the country.

Through an aggressive agenda to regain American leadership in clean technology innovation and manufacturing and an ambitious plan to rebuild and transform America's infrastructure, we will rebuild American competitiveness in the global economy and secure and create a new generation of good middle-class jobs across America.

At the same time, while many clean economy jobs are good union jobs, too many are still not. Too many companies are offshoring

jobs, offering substandard wages, conditions and benefits, or failing to provide a safe, healthy workplace. Progress has been made, but it is being put at risk.

We need a commitment to high-quality job creation across all sectors of the economy but especially related to clean energy adaptation and resilience. That means a commitment to increasing union density, labor standards and prevailing wage, health and safety protections, training, and project labor and community benefit agreements.

In closing, I want to reiterate that tackling the crisis of climate change, if done right, is a significant opportunity to ensure a more equitable society, increase U.S. global competitiveness, support and grow small businesses, and create quality, family sustaining jobs across the country.

We look forward to working with you, Chairwoman, Ranking Member, and the whole Committee as you move forward your agenda for the 116th Congress. Thank you again for the opportunity to testify today.

Chairwoman FINKENAUER. Thank you, Mr. Williams.

And now I would like to recognize Mr. Spigelmyer for 5 minutes.

STATEMENT OF DAVID J. SPIGELMYER

Mr. SPIGELMYER. Thank you, Chairwoman Finkenauer, Ranking Member Joyce, and distinguished members of the Committee. Thank you for the opportunity to testify today.

My name is Dave Spigelmyer. I am the president of the Pittsburgh-based Marcellus Shale Coalition. We represent an energy producing, transmission, midstream, companies, as well as more than 150 supply chain businesses supporting shale development across the Appalachian basin.

This is a critical and timely conversation about supporting our Nation's pursuit of a thriving clean energy economy, one that prioritizes innovation, job growth, and a sustainable energy future. Our country's energy landscape has changed dramatically over the last decade. Innovation and technology have enabled access to deep shale formations in the Appalachian basin as well as across our country which has triggered tremendous job growth.

The natural gas we are producing in Pennsylvania has driven unprecedented environmental gains that are enhancing air quality and making clean energy affordable once again for consumers of natural gas. Furthermore, natural gas is the vital fuel necessary and essential to back up interruptible sources of renewable energy to contribute to our electric grid.

As a result of shale development, our Nation is far more energy secure. In many ways, our economic and environmental progress is in large part owed to it.

In Pennsylvania alone, where 20 percent of America's natural gas is now produced, our industry supports over 300,000 direct and indirect jobs and contributes \$45 billion to our State's economy, according to PriceWaterhouseCoopers.

From Pennsylvania's labor community with union halls at full employment to new building tradesmen and women being trained, jobs are being generated to mobilize our Nation's energy infrastructure. Our building trades are constructing new power generation

facilities, pipelines, and a world-class petrochemical complex just west of Pittsburgh. This facility alone is a \$6 billion investment. It is one of the largest construction sites in America with more than 147 cranes active, employs 6,000 building tradesmen and women to build this world-class facility.

There are also countless small business owners whose entrepreneurial spirit has seized the opportunities presented by this industry, including our State's agricultural sector. Proceeds from natural gas development has indeed saved family farms.

Pennsylvania consumers have witnessed and have benefitted from historic reductions in natural gas commodity prices, especially those on fixed incomes. Natural gas commodity prices for end-use consumers are down 56 to 76 percent, depending on which utility serves your natural gas, since 2008. And wholesale electric prices in the PJM ISO are down 41 percent since 2008, saving the average household between \$1,200 and \$2,500 annually, according to our Pennsylvania Public Utility Commission.

Pennsylvania's economic strides have been met with equally impressive air quality achievements thanks to innovations in technology, tightening environmental performance standards, and increased use of natural gas. We have reduced volatile organic compound emissions which are down 51 percent, sulfur dioxide emissions down 82 percent, nitrogen oxide emissions down 72 percent. And additionally, Pennsylvania's carbon dioxide emissions from electric power generation where natural gas is playing a bigger and bigger role are down 30 percent since 2005.

Nationally, according to the U.S. EPA, in 2017, total greenhouse gas emissions across the U.S. reached their lowest levels in 25 years, propelling the U.S. to be a world leader in CO2 emission reductions. This is not despite the shale revolution; it is because of it.

As I stated earlier, natural gas is the most reliable and affordable partner for our growing clean energy economy. When intermittent renewable sources are unavailable, dependable baseload power is essential. Natural gas generators can scale up rapidly to meet demand, making natural gas a vital partner with renewable energy.

Natural gas is also vital to our everyday lives as a manufacturing fuel. All steel, glass, plastics, chemicals, fertilizers, powdered metals, pharmaceutical medications, and indeed, one-third of our power generation today are produced from natural gas. Without a doubt, any conversation about clean energy must be grounded in the partnership that will make that possible.

Supporting a thriving natural gas industry from production to pipeline deployment to its growth in power generation should be a core focus of any public policy discussion aimed at building upon the progress our industry has realized for Pennsylvania and in the Nation.

As you continue to explore how Congress can best support the growth of our Nation's clean energy economy, I appreciate the recognition of this Subcommittee that natural gas is important and a vital component of that discussion.

On behalf of our members and the thousands of men and women who work in our Nation's natural gas industry, thank you for having me here today, and I look forward to your questions.

Chairwoman FINKENAUER. Thank you, Mr. Spigelmyer.

And now we are going to begin questions from the members up here, and with that, I will recognize myself for 5 minutes.

And, Mr. Brooks, since you again spent those 5 hours in Chicago in that airport, I feel like I should start with you. Thank you again for being here today.

As you know, the biodiesel tax credit has been key to growing your industry in our State. I know that our gas stations and truck stops and, therefore, consumers and truck drivers also benefit from this tax credit to keep actually gas prices low. Can you explain how the credit works to the Committee? And then how does your company use the credit? And why is its lapse so damaging that it is forcing some plants to shut down?

Mr. BROOKS. Thank you, Congresswoman Finkenauer, for the question. First, the biodiesel tax incentive is a dollar-per-gallon credit available to the taxpayer who blends the biodiesel or renewable diesel into the petroleum diesel fuel, who either use or sell the mixture or trade it with their business. The net effect is that each gallon of biodiesel and renewable diesel used in the United States offers a dollar of revenue value throughout the value and supply chain.

Secondly, the flexibility of the incentive, when it is extended prospectively, spurs both investments in production when the producer claims a portion of the credit and in the blending infrastructure when the discretionary blender uses a portion of the credit.

Unfortunately, when the biodiesel tax incentive lapses, the market relies on Congress' history of retroactively reinstating that credit, so someone must bear the burden of taking the risk that Congress will not reinstate the credit. The downside of the market reliance is that at least one party, the producer or the discretionary blender, eventually has to be held on accounts receivable.

Finally, as discretionary blenders become less and less willing to take the pricing risk associated with the uncertainty of the extending tax incentive, biodiesel and renewable diesel producers are forced to bear the risk, the full risk, and are exposed to the dollar per gallon price risk on every gallon produced.

Chairwoman FINKENAUER. Thank you so much. And could you also elaborate just a little bit further too on how the uncertainty surrounding the renewable fuel standard and the biodiesel tax credit is impacting our farmers and our rural communities, just a little more broadly?

Mr. BROOKS. Yes, ma'am.

Chairwoman FINKENAUER. And what you are hearing on the ground. Yeah.

Mr. BROOKS. The uncertainty of the RFS, because of not growing the volumes in the last 5 years, has created havoc to the Midwest farmer, as seen by the prices that they are bringing at harvest time. They are in the red as compared to the first 5 years of the RFS. We have got trade wars, the uncertainty, then you throw the SREs into the mix. It creates a problem for the markets in RINs generation which affects fuel prices. Then the producer can't

sell at a stable price, creating further instability in the market. And farmers that are investors in the plant suffer because of the grain price, they suffer because of the uncertainty of the market, and they are suffering because of the investments that they made in renewable energy.

Chairwoman FINKENAUER. Thank you. And actually, something that I learned when I was visiting you guys at the plant not that long ago had to do with something that we are watching very closely with the Department of Commerce. Right now I understand that they are considering reducing countervailing duties on biodiesel from Argentina.

As you know, Argentina's policies were undercutting American biodiesel producers, and the current countervailing and anti-dumping duty orders were meant to level the playing field. In the short time that they have been in place, I understand that the rates have been successful in keeping out these unfairly priced imports.

Can you tell us, if the Department of Commerce moves forward with reducing these rates, what impact will that have on Western Dubuque Biodiesel and other small businesses like yours?

Mr. BROOKS. Good question, Chairwoman. When the countervailing duties were not in place, we saw production decrease to 60 percent of capacity throughout the Midwest and the United States. So the differential tax credit that Argentina had allowed for their feedstocks, to make biodiesel, allowed those imports to come into the United States cheaper than the farmer could even grow the bean and have the oil crushed from. And as a result, discretionary blenders were taking advantage of the market, driving prices down with cheaper imports coming into the country.

Chairwoman FINKENAUER. So it would be fair to say that you would agree that the administration and the Department of Commerce and Secretary Ross should not be allowing these countervailing measures to go away, and if they did, it would be detrimental?

Mr. BROOKS. Yes, ma'am, and I have told him as much personally.

Chairwoman FINKENAUER. Thank you very much. Appreciate it, Mr. Brooks.

And with that, my time is about to expire, so I would like to recognize Dr. Joyce for his 5 minutes.

Mr. JOYCE. Thank you, Chairwoman Finkenauer.

Mr. Spigelmyer, you piqued my interest with some information that you discussed with the expanding shale industry in Pennsylvania. You talked about the positive impact on agriculture. Now, realize this Subcommittee also addresses agricultural issues and entrepreneurship. Would you please explain more what you were talking about in that?

Mr. SPIGELMYER. Yeah. When leases are taken, bonus payments are paid. In Pennsylvania, it has exceeded \$5 billion to mineral owners and land owners across the Commonwealth of Pennsylvania. And my comment was that it has indeed saved family farms, and that is my experience.

As well, royalties are paid. On average, 15 percent of the production royalties go back to the mineral owner, and that too has pro-

vided valuable income back to consumer—or back to mineral owners in the Commonwealth of Pennsylvania.

Mr. JOYCE. During my time in the district work period in August, I had the opportunity to visit the new petrochemical plant that Shell is building in western Pennsylvania. Can you talk about the economic impact of that on community and actually on the Nation at large?

Mr. SPIGELMYER. Sure. It is the first of its kind petrochemical complex that is being built just to the west of Pittsburgh. About 70 percent of plastics manufacturers are located within 700 miles of Pittsburgh, yet they have had to transport the raw materials for plastics manufacturing to that region by truck. The savings on a cost of goods sold is about 1.3 percent right out of the gate, but the jobs being generated, that is like the—the downstream jobs that will likely flow from that are extraordinary. That plant is expected to be complete in 2022.

And I would share that it is not just the investments from a \$6 billion facility like that. We have written the obituary for manufacturing in the Appalachian basin for the last four decades, and today we are writing birth announcements up and down the Ohio River. We have got not only the \$6 billion that has been invested at that facility, we have got a billion dollars now being invested by US Steel. We have got the savings of the Marcus Hook Industrial Complex just outside the Philadelphia airport. We have got \$13 billion of new power generation facilities. Again, we produce about 250 percent of the power that we use in Pennsylvania, and it has saved consumers up and down the PJM ISO, you know, 41 percent on their wholesale energy cost.

And I think I would also share that from a small business standpoint, I would be remiss if I didn't mention that we have witnessed small businesses that started in 2008 with a person or two. I will use one for example. Steel Nation. It is a building manufacturer south of Pittsburgh. They had one employee, had less than a million dollars of gross proceeds annually. They now have 30 employees at that location, and their proceeds are \$40 million annually.

Those small business type of stories are being told over and over and over again all through Pennsylvania, and I am sure, Congress, you have a chance to talk to a lot of those folks every day.

Mr. JOYCE. We are going to ask that you just bring the mic closer so that we can hear your important answers.

Mr. SPIGELMYER. I am having an issue with my mike here, but that's fine. Thank you.

Mr. JOYCE. You have mentioned natural gas in power generation, and importantly, its partnership with the renewables. What specifically have you observed in Pennsylvania? This is so important as we reach and embrace the all-of-the-above approach to be able to have the strong interaction with the reusable renewables and with the natural gas industry.

Mr. SPIGELMYER. Yes. In 2004, Pennsylvania passed an alternative energy portfolio standard requiring 18 percent of their power be generated by tier 1 and tier 2 sources. Those are renewable sources of energy as well as new technologies. We are on our path there today, but I would share that in Pennsylvania, our wind doesn't always blow and our sun doesn't always shine. And con-

sumers across Pennsylvania require that when they turn the switch on, their power comes on. There is no better partner for renewable energy than natural gas. Natural gas comes on quickly, it comes on affordably, and it is reliable in the Commonwealth of Pennsylvania.

Mr. JOYCE. Thank you for your comments. Thank you for emphasizing the partnerships that we need to be able to achieve, the benefits to the agricultural industry which natural gas has occurred and developed in Pennsylvania.

As a physician, understanding the decreased emissions—and we quoted very similar, I think identical numbers on the decreased emissions. That is important to my constituents. It is important to all of Pennsylvania.

I thank you all for being here.

Mr. Brooks, I would be amiss if I didn't thank you for your military service as well.

I yield back my time, Madam Chair.

Chairwoman FINKENAUER. Thank you, Dr. Joyce.

And with that, I would like to recognize Representative Angie Craig for 5 minutes.

Ms. CRAIG. Thank you so much, Madam Chairwoman. Thank you to all of you for being here.

And, Mr. Brooks, I wanted to start with you. As a member of the Ag Committee, it is an honor to fight for family farmers in Minnesota. I want to direct my question and also just applaud the Chairwoman for her work on biodiesel and specifically her bill to provide the 2-year extension of the biodiesel tax credit of which I also am an original co-sponsor.

As you mentioned, Congress previously extended the tax credit retroactively for 2017, but it expired in 2018. You noted in your testimony that the biodiesel blenders tax incentive has helped achieve the desired goal of expanding domestic production of clean energy resources and jobs here at home. I know Chairwoman Finkenauer and I have frequently pushed for quick action, but I am curious to hear what you think stands in the way at this point of getting this tax credit extended or reauthorized, and how does that lack of certainty impact small businesses?

Mr. BROOKS. Excellent question. Thank you for being a co-sponsor on the bill. I can't answer why it hasn't happened specifically, but I can tell you what the impact is for it not being extended. We have seen years where the credit has lapsed, 7 of the last 11 years, which has the effect of coming in in December or January and February, which brings no value to the producer or the blender missing gallons, and it creates an uncertain market for the person buying downstream because they don't know if the credit is coming. Should they buy the gallon or not buy the gallon. So I sell to discretionary blenders who take on a portion of that credit just like I do.

So we have an accounts receivable that is out for 21 months. That is hard to run a business when you have receivables out 21 months, even for a discretionary blender and other small businesses like ours. So getting it reinstated would be greatly appreciated.

Ms. CRAIG. Thank you.

Mr. Williams, I wanted to ask you as you—thank you for what you do at the BlueGreen Alliance as well. How do we prepare the current and future workforce? I spent about 4 years as the head of HR for a major organization in Minnesota, but how do we prepare American workers to be part of this growing clean energy economy?

Mr. WILLIAMS. Thank you, Congresswoman. The question—and for your work. We are founded in Minnesota, so we appreciate your service there as well.

So a public investment in training and preparedness, plan development, economic development, but especially that point on training is incredibly important to this. And it is incredibly important that when the Federal Government invests in training and workforce development, it does so in partnership with local communities, with unions, with registered apprenticeship programs, with community colleges, and especially leaning on working with unions and specifically registered apprenticeship programs in the construction and building trades industries, because there is a significant amount of expertise there, and we want to be able to lift up the expertise and the work that is already happening. So there is a number of pieces of legislation that have done this, but that would be what I recommend.

Ms. CRAIG. Thank you.

And then finally, I just wanted to say, Dr. Abramson, thank you for presenting the DOE grants. It was incredibly enlightening, and I have got to figure out what we are doing in the Second Congressional District and help us get more of those grants. So thank you.

Madam Chair, I yield back.

Chairwoman FINKENAUER. Thank you, Congresswoman Craig.

And with that, I will recognize Representative Jim Hagedorn for 5 minutes.

Mr. HAGEDORN. Thank you, Madam Chair. It is a pleasure to be here. I thank the witnesses.

As a representative from a rural district in Minnesota and someone who serves on the Ag Committee, I am part of the Biofuels Caucus. We certainly support biodiesel, ethanol, those things. We would like to see the tax credits extended again, reinstated, and also make sure that we do get the small refinery and other issues cleared up.

I spoke with some people at Agriculture, including the Secretary himself over the break, and he said they are working on that, and I think maybe we will see some progress here in the near future. So, hopefully, that will go well. We support the industry.

Thank you, Mr. Brooks, for being here.

You know, small business does depend on energy, all of the above, and back talking on the break, manufacturers, it doesn't matter, you know. Trucking companies, everybody, they need abundant, reliable, low cost energy. And sometimes I think we get a little conflicted where we feel, and maybe there is—you know, folks think that the world's coming to an end and we have to make all these, you know, big changes, Green New Deal and all that. And that, I guess, could drive making changes at any cost, but I don't believe in that. I think we need to be efficient. We need to do

things that are going to be right for our economy and right for our consumers and everyone else.

So all of the above makes sense to me in keeping downward pressure on the cost of energy, because when the price of energy is inflated needlessly, the price of every cost and service in our economy goes up, takes money out of people's back pockets, makes us less competitive around the world. It is not a good thing.

And we also need not just all of the above but the energy infrastructure, and I was happy to hear about pipelines, refineries, distribution points and, you know, this talk about labor and how these things can all connect. But the labor folks that I talk to are a little disappointed because a lot of pipeline projects out there, a lot of refinery projects and the folks that are, quote/unquote, for clean energy are the ones blocking those.

We have a pipeline in northern Minnesota, Enbridge 3. It is a replacement for crude oil. And, you know, the clean energy folks say we shouldn't do it because we should get off of fossil fuels, but there is no path at this point to eliminate fossil fuels from our economy. As a matter of fact, there is no technology that can get us there for even electricity production. We don't have the battery storage technology in an efficient way or even a practical way to make that happen. So until that, it would be irresponsible, I think, for us to try to run our traditional energy companies out of business while we are promoting the, you know, so-called again clean energy. Nothing is clean. There is issues with every source of energy.

But I was very impressed, Mr. Spigelmyer, with your testimony about what is going on in natural gas and the way that great American technology is being used to first locate that gas and go get it and then driving down emissions, driving down costs, providing the baseload power that is necessary in order to make sure that our small businesses and consumers and everybody can rely on that.

One of the things, again, I see in conflict is that some of the folks that would like us to move from, let's say, coal-fired power plants to natural gas, you know, think that is a good move, but then they don't support fracking. What is your opinion of that? I mean, right now, don't we have about a 300-plus year reserve of gas that we predict, and we are exporting it and all these other things?

Mr. SPIGELMYER. It is a great reflection, Congressman. I would share that we have gone from a period of high price and a lack of supply to periods of abundance and affordability, all driven by technology. Some would think it is because of hydraulic fracturing. We have actually been hydraulically fracturing natural gas wells in America since the early 1940s.

Hydraulic fracturing certainly plays a role in releasing not only natural gas but liquid hydrocarbons to the surface, but the technology changes in production today are the ability to turn a drill bit horizontally to produce far more than anyone ever thought possible through unconventional horizontal development. And as you mentioned, reserves in the neighborhood of 300-plus years are certainly possible through this technology.

I would share with you that we put this coalition that I represent 10 years ago. None of us thought that Pennsylvania could go from

180 BCF of production or 180 billion cubic feet of production to over 6 trillion cubic feet of production in 10 years. We are now the number two producer of natural gas in America as a result of that technology improvement.

Mr. HAGEDORN. I would also add that, you know, a lot of—I am not at all against or opposed to wind and solar. I support it. I think we should just be practical about it. It is an intermittent source, and it can contribute, but it is not the panacea at this point because of technology. But if we want a lot of wind and solar, we also need a lot of copper and other types of materials, and we have to get that through mining. And we also want to do that in Minnesota, and some of the folks, again, that say they are for clean energy don't want the mining. So maybe there is some conflict to be worked out on both sides.

Thank you. I yield back.

Chairwoman FINKENAUER. Thank you, Representative Hagedorn.

And with that, I will recognize Representative Jared Golden who is the Chairman of the Subcommittee on Contracting and Infrastructure, again, one of my favorites, for 5 minutes.

Mr. GOLDEN. Thank you, Madam Chair.

Mr. Williams, I just wanted to point out something that—and I follow your organization closely, and I appreciate the work that you do and the effort that you are making. I wanted to point out some things going on in Maine for your alliance to look into.

One is we have some loggers who have joined the machinists union of late. And when talking about the renewable fuel standard in woody biomass, we have a problem in Maine, and I think most of the northeast and parts of the southeast as well, which is that it currently only allows for woody biomass that comes from planted trees and tree residue from actively managed tree plantations.

Of course, about 57 percent of our forests in the United States are owned by private citizens, families, private cooperatives, industries, and others. And the majority of these rely on natural regeneration for stand establishment and not artificial regeneration like we see in plantation forests. So it feels like we are leaving a lot of potential biomass in the woods, so to speak. And I think that, you know, we have been pushing as a Maine delegation to get the EPA to treat this a little bit differently and get that woody biomass that is naturally regenerative into the market, you know, and assisted through the Renewable Fuel Standard.

I would also point out for your organization's interest that this isn't just about the loggers but the biomass facilities themselves, some of which are going out of business as, you know, investors look elsewhere where there are other energies, you know, that are reliable—can be, you know, supported through the Renewable Fuel Standard and other tax incentives and others that just aren't being prioritized for biomass.

In addition, we have got the saw mills and a lot of other forest products manufacturers, many of whom are union to include steel workers, boilermakers, machinists, electricians, and others, but I just think there is some space for you to get involved and step in and be supportive of some of these changes. So I wanted to share that with you.

I am also excited about growth of solar in the State of Maine, but there is a lot of talk about the need for some apprenticeship programs and others as we see that growing workforce coming into our State. There is a workforce shortage and a need for apprenticeship opportunities in others. Don't forget about Maine, is all I would say about that.

Dr. ABRAMSON, I want to ask you just about your membership in general. Do you have a lot of members that directly use biomass or provide equipment or services to clients who generate with biomass? And also, we have a great bill. Senator Angus King sponsored the Biomass Thermal Utilization Act which would add tax incentives for the installation of energy efficient wood boilers, stoves, and heaters, residential and commercial, so maybe you would be supportive of that as well.

Ms. ABRAMSON. Yes. Thank you so much. And just to note on that last point, I mean, we are supportive of across the board incentivizing energy technologies, you know. The incumbent energy industries have historically enjoyed tax credits, and that has been incredibly valuable in promoting economic development and the growth of new industries in this country and the renewable energy and energy efficiency biodiesel industries. And as you noted, the thermal, you know, energies industries certainly should benefit as well from long-term stable tax policies that can incentivize these technologies.

To your earlier question regarding our membership, it is quite diverse. We have renewable energy, energy efficiency, natural gas, combined heat and power, waste heat to power, biomass, biodiesel, storage grid technologies, carbon capture. I mean, it is quite, quite extensive, and it just speaks to the breadth of the clean energy economy.

I would say in Maine, actually, one exciting member that I have actually noted in my written testimony—

Mr. GOLDEN. I read that.

Ms. ABRAMSON.—is Kay Aikin from Introspective Systems who was just in town a little bit ago in March to talk about how the Department of Energy has helped her commercialize her advanced microgrid technology and software solutions, which she is now bringing to bear in solutions such as providing reliable power to the Isle au Haut, Maine, which is currently under jeopardy because they have this 7-mile pipeline or cable, rather, undersea cable that is at risk of failure, and she is replacing that with a solar and storage microgrid solution. So it is a terrific case study.

Mr. GOLDEN. I am glad you shared that in your testimony. We have a lot of island communities. And talking about battery storage, solar, wind, and others, you know, with the more traditional sources of energy is, I think, important for the future of those communities. Obviously, that is not special just in the Maine coast, so thank you—

Ms. ABRAMSON. Thank you.

Mr. GOLDEN.—for sharing that.

Now, lastly, Mr. Williams, I just wanted to share. Wind energy potential in Maine—I think a lot of you know this too—is huge. In fact, the Gulf of Maine is, I think, unique in its ability to produce wind power offshore. However, you know, you have got some expe-

rience trying to pull together alliances that sometimes people may traditionally think are at odds, so I would love to hear your feedback at some point about how we can tap into that, you know, energy source for the State of Maine. I think about 3 percent of the shoreline, if we were to utilize that for wind, could power almost the entire State.

Of course, we would have to talk about how to get that energy into the grid, but beyond that, I think a lot of lobstermen and also machinists in Maine are rightfully concerned about how that offshore wind could impact their fisheries. We have got some work to do to build a coalition that can work together, and maybe the BlueGreen Alliance has some experience with this type of work and could help.

Mr. WILLIAMS. Yeah. Really quick, so I live in Maine, actually.

Mr. GOLDEN. I didn't realize that.

Mr. WILLIAMS. Not in your district, sadly, though. But been working closely with the IBEW on solar, the AFL-CIO. The question on woody biomass was great earlier, and we would love to talk further. Those conversations need to be updated. They are based on previously held notions. We need to dig into that further.

On offshore wind, I just want to flag. I have been working with the ironworkers in Maine. There is going to be a conference held on October 16 in Portland, so we would love for you to come or send staff. We would love to help dig into that further.

Mr. GOLDEN. Thank you very much.

Chairwoman FINKENAUER. Thank you, Representative Golden.

And now I would like to recognize Representative Burchett for 5 minutes.

Mr. BURCHETT. Birch like the tree and et like I just et breakfast, Chairlady.

Thank you for letting me poach your Committee. I am not a member of this Committee, and I am honored that you would let me be here for a short moment.

And thank you, Ranking Member Joyce, as well. Thank you.

While I am not a member of the Subcommittee, I appreciate y'all allowing me to be here to discuss this important topic. I think there is plenty of opportunities in the clean energy economy for innovation, job growth, and growing small businesses across the country, and I know that there is going to be plenty of different approaches to doing all of this. And I am hopeful whatever we do, we can keep our free market principles in mind when we look at different approaches.

For example, I recently introduced the Carbon Capture Improvement Act. See how I worked that in there? I just worked that in there that I had a bill that dealt with this. This is a bill that would provide industrial facilities and power plants a financial incentive to invest in carbon capture and storage equipment. The goal here would be to invest in companies that are working to grow clean energy.

I think we ought to incentivize business to lower carbon emissions rather than force it on them through more regulations that seem to just employ bureaucrats and not really accomplish what we attempted to do. And I would suggest that I would like for y'all

to take a look at them and see if you are interested in helping support this initiative.

Aside from that, I would like to know what you all see as the most important step we should be taking to ensure this sector is getting the support needed to continue to grow this economy. And I will stop there.

Ma'am, you are nodding your head, so why don't you just jump in?

Ms. ABRAMSON. Well, I would be happy to jump in. I think two areas that I noted in my testimony that are particularly critical, one includes appropriations. This is an area where there are some promising technologies. We do need to continue to invest in developing those technologies and bringing down costs. And we have some members not so much working in the larger carbon sequestration projects, although there are some very exciting ones out there such as NetPower which is developing a zero emitting natural gas facility in Texas which is very exciting. And then we have others that are investing in carbon capture utilization, so developing bio products or other materials out of carbon and sequestering it through that mechanism.

So I do think continued funding is important—because one of the things we hear is that venture capitalists are not going to necessarily help fund unproven technologies. They want to see that the technology has already been demonstrated, and that is where the government comes in, where we can invest in promising technologies that could have both economic and environmental benefits and help them bring those technologies to commercialization so the private sector—we can leverage those private sector dollars to continue that work.

So I would say appropriations is critical. And then whether we are talking about regulation or legislation such as tax incentives having, I think to the extent possible, that we can incentivize across the board and allow technologies to compete, that is extremely helpful.

Mr. BURCHETT. Anyone else?

Mr. SPIGELMYER. I will just jump in that carbon capture and storage is certainly a huge opportunity for enhancing, you know, recovery of liquid hydrocarbons. I know the Department of Energy is spending a fair amount of money through their NETL (National Energy Technology Labs) programs across the country. I did have a chance recently to talk to Deputy Secretary Winberg at the Department of Energy, and I know they are spending a fair amount of money to take a look at how carbon capture and storage can enhance recovery of not only natural gas but natural gas liquids as well.

Just one add on I would have. There was a comment made about methane. To give you a perspective, in 2008, natural gas pricing at the wellhead was \$13.71. Just this past week, bidweek pricing for September was \$1.61. Operators in my space have every incentive to capture every single molecule of natural gas that they can capture because it is the product that they sell. They have an incentive to make sure they have technologies in place to make sure we are not allowing methane to escape into the atmosphere, and we are doing just that.

Mr. BURCHETT. Do we have any facts or figures on how much methane is being produced, I guess you would say, anaerobically through our landfills?

Mr. SPIGELMYER. You know, it is a great piece that fits into the renewable portfolio standards of almost every single State in the country where, you know, landfill gas is adding to power generation and new technology for, you know, for business growth as well. I don't have a figure on how much that is, but it is significant, sir.

Mr. BURCHETT. Chairlady, I will yield back the remainder of my 4 seconds. Thank you, ma'am.

Chairwoman FINKENAUER. Thank you, Representative Burchett.

And thank you all so much for taking the time today. It truly does mean a lot that you all traveled all this way and to have your voices heard and to have us be able to ask you these questions that we think are very important for Congress to hear and learn from.

And, you know, I just have to tell you, you know, as we start to look at tackling the unprecedented challenges that come with climate change and unpredictable weather, you guys know this, it is more important than ever before to continue to support our clean energy economy. But it is also more important than ever to be here and listening to each other, and also making sure that we are tackling this in a way that we are listening to different districts throughout the country and bringing folks together about what works in their district, what they have been doing that has been working well, how do we do more of what works well, and how do we create the innovation necessary to tackle the changes that are needed to be made to, again, address climate change and make sure that, again, we are bringing folks together as we do it.

I think it is incredibly important, and I am just really grateful to all the members of the Committee here today where we can have those conversations and the folks that wanted to, you know, again testify. And there is a lot going on in all of our districts. I know I have got my friend in biodiesel here, but, you know, there is great work being done in wind and in solar and actually in methane capture too from our farmers as well. That is actually one of the first bills that I helped passed through the State house over 5 years ago, and these are the types of things that have been happening. We need to continue to support the innovation. And I am just again very, very grateful.

And also, on top of all of it, as we have heard here today, small businesses are at the forefront of the clean energy economy and some of this innovation promoting new technologies in both renewable energy and energy efficiency. From the field to the factory floor, small businesses are playing a very key role.

Our conversations today also underscore the fact that the clean energy economy supports millions of high-skilled workers and jobs. With the production of certain energies like wind and biofuels largely concentrated in rural areas, these industries can be a boon to small communities around them. Considering that job growth in rural areas continue to lag behind the rest of the country, clean energy is a real opportunity to stimulate economic growth in our rural communities. Federal and State investment in incentives for

clean energy and energy efficiency have played a signature role in growing these industries and, in turn, supporting our small businesses.

The testimonies that we heard today demonstrate why these incentives like the biodiesel tax credit must be consistent. Business owners need certainty. Mr. Brooks should not be guessing from year to year whether he can use his important credit. Our conversations today underscore the need for the biodiesel tax credit immediate extension, and I will continue to call for its passage in the House and in the Senate.

The clean energy economy has an outside impact on Iowa's rural communities and our small towns, as we have discussed here today, and, you know, these growing industries will undoubtedly continue to be an important part of our country's economy for decades to come.

This hearing is just one of the many steps that this Committee is taking to look at how our small businesses and our entrepreneurs across the country, especially, again, those in rural areas, this is Rural Development, Ag, Trade, and Entrepreneurship Subcommittee, continue to grow and thrive. I look forward to continuing to work with each of you on these important issues.

And again, I just want to say thank you to Dr. Joyce for his work here on the Committee today as well and bringing perspective again from all across the country.

And I would now like to ask unanimous consent that members have 5 legislative days to submit their statements and supporting materials for the record.

Without objection, so ordered.

And if there is no further business to come before the Committee, we are now adjourned. Thank you.

[Whereupon, at 11:15 a.m., the Subcommittee was adjourned.]

A P P E N D I X

Testimony of Lynn Abramson, President, Clean Energy Business Network

United States House of Representatives
Committee on Small Business
Subcommittee on Rural Development, Agriculture, Trade, and Entrepreneurship

Hearing on “Growing the Clean Energy Economy”

September 10, 2019

Chairwoman Finkenauer, Ranking Member Joyce, and Members of the Subcommittee, thank you for the opportunity to testify today on the topic of growing the clean energy economy.

My name is Lynn Abramson, and I am the President of the Clean Energy Business Network, or CEBN. My organization serves as the small business voice for the clean energy economy, with a network of more than 3,000 small and midsize business leaders across all 50 states and approximately 350 Congressional districts.

My remarks today will focus on growth: The growth of the clean energy economy as a whole and the growth opportunity that each small business across this nation represents. I will outline a vision for how policymakers can help these businesses deliver on their potential to create a cleaner, more affordable, more reliable energy future for all Americans.

As brief background on my organization, CEBN started in 2009 as a project of The Pew Charitable Trusts with the goal of informing and engaging clean energy businesses in policy issues impacting their industry. Two years ago, we spun out of Pew to incorporate as a nonprofit organization in our own right. We became an independent, small business-focused subsidiary of the Business Council for Sustainable Energy (BCSE)—a coalition of the leading sector-specific trade associations and corporations in the energy efficiency, renewable energy, and natural gas sectors. Our mission is to enhance opportunities for small and midsize clean energy providers through policy support, business development, and market and technology education.¹

Some of my testimony today will reflect the needs of the clean energy industry as a whole, while other aspects will focus on the unique challenges facing small businesses.

The Growth Opportunity for the Clean Energy Economy

The *2019 Sustainable Energy in America Factbook*—a report produced by the Business Council for Sustainable Energy (CEBN’s parent organization) and Bloomberg New Energy Finance—documents that a significant transformation of our nation’s energy sector is underway.²

Renewable energy, energy efficiency, and natural gas comprise the growth sectors of the U.S. energy economy, now supplying more than half our electricity and employing 3.4 million American workers. Our economy is doing more with less energy, with an overall trend in

¹ <https://www.cebn.org/cebn-overview-for-policymakers/>

² <https://www.bcse.org/factbook/>

decoupling between gross domestic product growth and energy use over the past decade despite a slight uptick in 2018. Renewable energy and energy-smart technologies attracted \$64 billion in private investment to our economy last year, the second-highest amount worldwide.

This transformation is happening not just in the United States but across the world. Bloomberg New Energy Finance forecasts that zero-carbon fuels will supply two-thirds of global electricity by 2050, with almost half the world's power provided by wind and solar alone.³ Renewable energy will attract 77 percent of the \$13.3 trillion in new power generation assets through this timeframe.⁴

CEBN's companion project to the *Factbook*, called *Faces Behind the Facts*, showcases leaders from clean energy businesses, large and small, behind these trends.⁵ I will share some case studies in my testimony today to illustrate the breadth of the clean energy economy and the business impacts of policy decisions.

The Growth Opportunity for Small Businesses in the Clean Energy Economy

Small businesses comprise more than 99 percent of U.S. companies and employ 47.5 percent of American private-sector workers.⁶ As the clean energy economy grows, so too will the economic impact of small businesses working in these low- and zero-carbon energy sectors.

As I noted earlier, our network includes more than 3,000 business leaders in all 50 states—and this is only the tip of the iceberg among the 3.4 million Americans working across the clean energy economy.⁷ Within the states represented by members of this Subcommittee, CEBN's reach spans more than 300 clean energy professionals, with at least 31 located in your respective Congressional Districts.

The technologies and services these companies offer are as broad as their geographies: renewable energy, energy efficiency, combined heat and power, waste heat to power, natural gas, grid technologies, storage, fuel cells, batteries, alternative fuels and vehicles, and carbon utilization or sequestration.

And their stories show that the clean energy economy is not only powered by tech giants in Silicon Valley. It's powered by the neighbors we run into at the grocery store—like "BioJoe" and Beth Renwick.⁸ More than a decade ago, this South Carolina-based couple experimented with making biodiesel in their garage to save money on gas. Over the years, they've built and grown Green Energy Biofuel, a purified biofuel business that now has two production centers, regional distribution throughout the southeast, and several dozen local jobs that can't be outsourced. Companies like theirs are providing clean energy technologies and services in communities all across the nation, spurring local economic development and creating jobs.

³ <https://about.bnef.com/new-energy-outlook>

⁴ *Ibid.*

⁵ <https://www.cebn.org/faces-behind-the-facts/>

⁶ <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

⁷ <https://www.cebn.org/cebn-overview-for-policymakers/>

⁸ <https://www.cebn.org/faces/biojoe-beth-renwick/>

Like the rising clean energy sectors in which they work, these small businesses represent the promise of growth and a better future. But how can we help them deliver on that promise?

In 2017, we surveyed our membership to assess the needs and priorities of small clean energy businesses.⁹ The findings are consistent with the themes that have emerged in countless discussions we’ve had with small businesses over the years.

When asked about the most significant challenges facing their businesses, policy was at the top of the list for many.

In fact, fifty percent of respondents reported that government or utility barriers to deployment posed a significant challenge for their companies, the highest response rate received out of any challenge identified. In roundtable discussions, business leaders highlighted the struggle of attracting investors and customers in a constantly evolving policy landscape. Even the non-policy related challenges they raised—for example, on customer and investor education, finance, and workforce issues—have the potential to be addressed in part through policy support.

Our parent organization (BCSE) and the leading corporations it represents consistently call for the need for stable, long-term policy frameworks. But if policy uncertainty is hard for a Fortune 500 company, just imagine how it is for a small business.

What can be done to remove barriers and create opportunities for small businesses across the clean energy landscape? This brings me to the importance of policy signals.

Policy Signals to Accelerate the Growth of the Clean Energy Economy

Congress can accelerate the growth of the clean energy economy—and small businesses within it—by establishing clear, stable, market-based policy signals that work toward the following goals:

- Maintaining a diverse portfolio of energy technologies
- Establishing a level playing field for competition
- Achieving emissions reductions to improve air quality and mitigate climate change
- Strengthening the reliability and resilience of energy infrastructure
- Providing affordable energy to all consumers
- Promoting economic growth, job creation, and the development of new industries and manufacturing capabilities.

In addition to the high-level recommendations that follow, the footnotes in my written testimony include links to several policy letters—cumulatively signed by hundreds of small businesses—outlining specific recommendations in more detail.

⁹ <https://www.cebn.org/faces/biojoe-beth-renwick/>

1. Tax

For many decades, tax policy has been an effective tool to accelerate deployment of all energy technologies, incumbent and new. The dozens of energy-related measures across the tax code have historically helped scale up deployment, bring down technology costs, leverage private-sector capital, and promote the growth of new industries and jobs.

Providing more stable, long-term tax policy signals is one of the most important things Congress can do to accelerate the continued growth of the clean energy economy.

Just ask Gary Fechter, who runs the combined heat and power development arm of UGI—a natural gas utility in Pennsylvania.¹⁰ He's passionate about showing customers how CHP can cut costs, improve reliability, and reduce fuel use by efficiently generating heat and power from a single fuel source. But often, the customers' final decision comes down to financing. When the investment tax credit lapses, he is forced to compete for bids with technologies receiving more favorable treatment in federal or state policy.

Recommendations:

- Congress should retroactively reinstate and provide a forward-looking extension of expired energy tax incentives for renewable energy, energy efficiency, and clean transportation/alternative fuel technologies. Ideally, this would provide a multi-year extension of clean energy tax incentives to create more certainty for businesses, investors, and customers and establish a level playing field across all technologies.¹¹
- Congress should also clarify that the entire portfolio of energy storage and waste heat to power¹² technologies qualify for the Section 48 investment tax credit.
- Moving beyond these technology-specific credits, a range of technology-neutral, goal-based approaches have been proposed on both sides of the aisle. Congress should proactively explore these new ideas in consultation with industry and stakeholders, seeking to understand how various proposals might address the unique facets of particular technology types, business models, and pathways to deployment.

2. Appropriations

Department of Energy applied research is behind most of the transformations the United States has experienced over the past few decades in both the incumbent and emerging energy sectors. From new oil extraction methods and hydraulic fracturing, to energy-efficient windows and dramatic declines in the cost of wind turbines and solar panels, these changes have impacted us all.

¹⁰ <https://www.cebn.org/faces/gary-fechter/>

¹¹ <https://www.cebn.org/wp-content/uploads/CEBN-2019-Tax-Extenders-Letter-House-3.18.19.pdf>

¹² https://www.epw.senate.gov/public/_cache/files/2/2/22ef4bea-547d-4259-a5ff-0b76d28bed62/B3695D3AD6F2BC3789AC7D806E73E8F7.business-support-letter-for-whp-itc-act-07.25.19-002_.pdf

At the CEBN, we have worked with entrepreneurs across the nation who have brought new technologies to market through partnerships with the Department of Energy, ARPA-E and the National Laboratories.

As an example, Kay Aikin of Introspective Systems, a company based in Maine, has leveraged multiple Department of Energy grants to develop advanced operational controls for microgrids. Her company's technology and software solutions enable customers to better control electricity demand, manage intermittent renewable energy sources, and integrate storage.¹³ She is now deploying these innovations in the field, and is about to complete a project on Maine's Isle of Haut that will provide a more reliable power source to the island using solar and storage.¹⁴

In our work with these businesses, we have seen that energy innovation knows no geographic boundaries. Within the eight Congressional districts served by the members of this Subcommittee alone, U.S. Department of Energy grants over the past five years have allocated more than \$1 billion towards projects to develop, commercialize, or deploy energy technologies (Table 1).¹⁵ Maintaining and building upon this federal support is critical to accelerating the growth of the clean energy economy.

TABLE 1. U.S. DEPARTMENT OF ENERGY GRANTS (FY2015-2019) TO RECIPIENTS OR PROJECTS WITHIN DISTRICTS SERVED BY 116th CONGRESS MEMBERS OF THE HOUSE SMALL BUSINESS COMMITTEE, SUBCOMMITTEE ON RURAL DEVELOPMENT, AGRICULTURE, TRADE, AND ENTREPRENEURSHIP

Subcommittee Member	District	Grants to Recipients Located In-District, FY2015-2019	Grants to Projects Performed In-District, FY 2015-2019
Rep. Abby Finkenauer (D), Chairwoman	IA-01	\$17,142,232.90	\$1,916,100.90
Rep. John Joyce (R), Ranking Member	PA-13	\$16,955,409.00	\$141,507,824.45
Rep. Jason Crow (D)	CO-06	\$87,515,283.13	\$75,091,066.13
Rep. Angie Craig (D)	MN-02	\$4,536,775.00	\$1,360,580.00
Rep. Jared Golden (D)	ME-02	\$111,157,731.14	\$73,880,009.14
Rep. Jim Hagedorn (R)	MN-01	\$5,592,119.76	\$1,652,419.76
Rep. Trent Kelly (R)	MS-01	\$755,823,777.79	\$4,377,726.79
Rep. Aumua Amata Coleman Radewagen (R)	AS	\$2,320,368.00	\$2,320,368.00
TOTAL		\$1,001,043,696.72	\$302,106,095.17

Source: USASpending.gov

Recipient and project columns may contain some overlapping data

¹³ https://www.cebn.org/media_resources/march2019flyin/

¹⁴ <https://microgridknowledge.com/microgrids-transactive-energy/>

¹⁵ Data compiled from www.usaspending.gov

Recommendations:

- Congress should work to finalize appropriations legislation for FY2020 that maintains—and ideally builds upon—FY2019 funding for the Department of Energy (DOE) overall and key programs within the agency.¹⁶
- It is important to fund not only basic science and early-stage energy research—but also the applied programs that help businesses scale, demonstrate, and commercialize their innovations.
- A handful of critical programs that should be supported within the DOE include Energy Efficiency and Renewable Energy, Electricity Delivery and Energy Reliability, Fossil Energy, the Office of Science, the Loan Programs Office, and the Advanced Research Projects Agency–Energy.

3. Infrastructure

A variety of clean and efficient energy technologies are readily available to improve the reliability, security, and flexibility of our nation's energy and transportation infrastructure.¹⁷

Across all federal programs relating to infrastructure, Congress should recognize that energy is an essential component of our nation's infrastructure. Clean energy solutions such as combined heat and power, microgrid applications of renewable energy and storage, advanced grid technologies, and load management can strengthen the resilience of critical facilities and that of the grid as a whole. Infrastructure to support the deployment of cleaner fuel sources can also further reduce our dependence on foreign oil and protect our national security interests.

Recommendations:

- In new or regularly-reauthorized programs such as the Farm Bill,¹⁸ disaster recovery legislation,¹⁹ transportation bills, or other infrastructure measures, Congress should seek to promote a more advanced electric grid, more resilient building and transportation infrastructure, more responsive load centers, and more secure power and fuel supplies.

4. Regulatory Certainty, Simplicity, and Transparency

Finally, with each new election there is understandably a readjustment of policy positions and priorities. However, when the policy landscape oscillates dramatically every few years on important matters such as emissions regulations, renewable fuels standards, or fuel economy standards, these changes create considerable uncertainty. It is very difficult for businesses to build long-term infrastructure when the ground is constantly shifting beneath their feet.

In addition to this uncertainty, businesses face an extensive degree of regulatory complexity across many federal energy programs and policies—from matters of siting and permitting to navigating or competing for available contracting or grant opportunities. It is extremely

¹⁶ <https://www.cebn.org/wp-content/uploads/CEBN-FY2020-Appropriations-Letter-House-4.12.19.pdf>

¹⁷ https://www.cebn.org/media_resources/fuel-for-discussion-episode-1-powering-through-the-storm/

¹⁸ <https://www.cebn.org/wp-content/uploads/CEBN-Farm-Bill-Letter-House-6.11.18.pdf>

¹⁹ <https://www.cebn.org/wp-content/uploads/2018/08/CEBN-Letter-Senate-FAA-Reauthorization-Disaster-7.24.18.pdf>

challenging for small businesses with limited resources and staff to wade through all of these matters, particularly if regulations or procedures change frequently.

And finally, many federal contracting, grant, or regulatory policies are very prescriptive when it comes to technology solutions. Where possible, the federal government should establish goals for the outcomes of these programs, and allow businesses to innovate and compete to offer the most effective and affordable technology solutions.

Recommendations:

- In legislation and oversight, lawmakers on both sides of the aisle should work collaboratively together and with each new Administration—to establish long-term, national energy policy goals and stable pathways to achieving those goals.
- Federal policy should encourage market-based approaches and competition among technologies that can most effectively and affordably achieve these goals.
- Congress and federal agencies should seek to make federal grant and contracting opportunities more accessible to small businesses, enabling innovators to bring the best technology solutions to bear. Potential improvements include streamlining "first-round" application requirements; applying more uniform procedures across federal agencies; and providing more opportunities for technology transfer, contracting, and commercialization of technologies that have previously received government funding.

I'll also note that CEBN is engaged in a stakeholder process to identify ways to help small businesses compete more effectively for federal research and development programs, specifically Small Business Innovation Research (SBIR) awards. We will share our detailed recommendations with the Small Business Committee shortly, ahead of your consideration of these programs in the coming weeks.

Conclusion

There is nothing more fundamentally American than a small business owner setting out to build a company. We are a nation whose core values assert that any challenge can be overcome with sufficient ingenuity and grit, and that anyone with a good idea and strong work ethic can succeed if given the right opportunity. We need lawmakers to stand beside our nation's small businesses in providing the opportunity to rise and compete in the growth sectors of the U.S. energy economy.

The clean energy economy has already arrived—and it will increasingly power our future. As we weigh national energy policy decisions, Congress should embrace this opportunity, accelerate it, and ensure that the energy technologies of the future are made here in America.

Thank you again for inviting me to testify, and I look forward to addressing your questions.

**Testimony of Thomas R. Brooks, General Manager
Western Dubuque Biodiesel, LLC
Submitted to the House Committee on Small Business
Subcommittee on Rural Development, Agriculture, Trade, and Entrepreneurship
Hearing on “Growing the Clean Energy Economy”
September 10, 2019**

Good morning Chairwoman Finkenauer, Ranking Member Joyce, and Members of the Committee. Thank you for inviting me to testify today. And thank you for considering the biodiesel industry as an important component of the clean energy economy. Small biodiesel producers are here today, delivering clean energy and economic development. I would also like to emphasize that small biodiesel producers can be a giant driver of economic opportunity in rural communities. All we need to continue delivering these benefits now and for the future is stable policy.

My name is Tom Brooks and I am General Manager of Western Dubuque Biodiesel, a 30-million-gallon-a-year biodiesel production facility in Farley, Iowa. Western Dubuque was formed by a group of eastern Iowa farmers and local businesspeople in November 2005, just months after Congress created the Renewable Fuel Standard and the biodiesel tax incentive as part of the Energy Policy Act of 2005. In June 2006, Western Dubuque raised just over \$19 million of equity from 557 investors, all of whom live within about 45 miles of the plant. That investment was a significant investment opportunity for a town of 1,500 people. We began construction on the plant the following month.

Today, Western Dubuque employs 24 workers at the plant, with a payroll of \$1.8 million. We also pay 28 contract truck drivers a total of \$1.9 million to move product in and out of the plant.

One hundred percent of our feedstock suppliers and our customers are American companies. In an average year, we buy 225 million pounds – 4,688 truckloads – of soybean oil from a crusher in Cedar Rapids. The value of that oil to local farmers is about \$73 million. Additionally, we purchase our needed catalysts from a local company in Manley, Iowa, spending another \$1.4 million in the community.

The employment and economic opportunities created by Western Dubuque Biodiesel supports the local community in another important way. Our company pays more than \$200,000 in taxes each year to the city of Farley. Additionally, we paid \$624,000 to the city's water tower fund in 2018 and contributed \$95,000 to Western Dubuque school funds. Without our contribution, I feel it's fair to say that the town would not be able to afford the new water tower and school expansion that are underway.

Our small business is a large economic presence in our small community. The economic opportunities and local community support also demonstrate agriculture's and biodiesel's potential to contribute to the clean energy economy. The fact is that rural America should always have an opportunity to share in the nation's economic growth. Strong, consistent federal policy is needed to ensure the continued development of the clean energy economy in rural America.

The biodiesel and renewable diesel industry is delivering clean energy today. The carbon reductions are measurable, helping state and regional programs to meet environmental goals as well as building the rural economy. What the biodiesel industry needs is stable continuity in existing federal policies.

Congress created the Renewable Fuel Standard and biodiesel tax incentive with the intent to reduce America's dependence on foreign sources of crude, reduce the transportation sector's carbon emissions, and add value to agricultural commodities and the rural economy. Today's biodiesel industry is proof these two federal programs are doing the job Congress envisioned.

Biodiesel is the nation's first domestically produced, commercially available advanced biofuel – which means it reduces greenhouse gas emissions by at least 50 percent compared to petroleum-based diesel. Biodiesel is a renewable, clean-burning diesel fuel made from a diverse mix of resources, including agricultural oils derived from soybeans and canola, as well as recycled cooking oil and animal fats. And it is the best tool for achieving the RFS program's goals of carbon reductions.

Biodiesel is primarily used in blends of 5 percent to 20 percent and does not require special fuel pumps or engine modifications. In fact, the majority of automobile manufacturers support biodiesel blends up to 20 percent in their engine warranties. Renewable diesel is a fuel made from the same feedstocks as biodiesel but using a different process—one more similar to petroleum refining. The resulting product (renewable diesel) is chemically indistinguishable from petroleum diesel but made from renewable feedstocks.

Without question, the biodiesel tax incentive has stimulated production. In 2004, prior to the enactment of federal tax incentives, our industry only produced 25 million gallons. When the incentives were first implemented in 2005, the United States produced roughly 112 million gallons; now, the market has climbed to as high as 2.9 billion gallons annually.

With biodiesel plants nationwide – from California to Texas to Pennsylvania – the biodiesel industry supports more than 60,000 jobs, \$2.5 billion in wages paid, and \$11 billion in economic impact. In many rural areas of the country, biodiesel plants are a driving force of the local economy, supporting the employment of technicians, plant operators, engineers, construction workers, truck drivers, and farmers.

Farmers receive better value for their soybeans, thanks to biodiesel. Approximately half of the biodiesel produced in the U.S. comes from soybean oil. Soybean oil is a co-product separated from soybean meal through oilseed crushing; the meal represents 80 percent of the soybean and the oil 20 percent. About 60 percent of the oil is used in food production. U.S. biodiesel production uses the surplus oil – which would otherwise have to be disposed – supporting a vital component of the value chain. Biodiesel adds 11 cents per pound of value to soybean oil, equal to 63 cents per bushel.

The livestock industry also benefits from increased biodiesel production. By boosting the value of surplus soybean oil – which would otherwise represent a cost or a waste product to crushers – biodiesel reduces the price of soybean meal, which is fed to poultry and livestock. As more

surplus soybean oil is processed for biodiesel production, farmers can grow and crushers can process more soybean meal for animal feed at a lower cost. Informa Economics has estimated livestock producers pay \$21 per ton less for soybean meal due to increased biodiesel production and use.

Approximately one fourth of all animal fats produced in the U.S. now go into biodiesel. Higher demand has led to increased value of those fats. While the price of animal fats are not primary drivers in determining the prices paid for fed cattle and market hogs, they do affect the profit margins in these industries.

There is still room for growth in the biodiesel industry and more feedstocks available. Stable, forward-looking tax and energy policy can help the biodiesel industry continue to stimulate economic growth.

Federal and state policies that aim to reduce greenhouse gas emissions – such as the RFS and California’s Low Carbon Fuel Standard – create increasing demand for low-carbon fuels like biodiesel and renewable diesel. A long-term extension of the tax incentive, and implementation of the Renewable Fuel Standard as Congress intended, would be the best ways to help the industry meet those policy goals. With a predictable, long-term tax incentive in place, the biodiesel industry could make necessary investments, grow with confidence, and create significant new employment opportunities. The tax incentive enables small, emerging companies to access capital at a lower cost, which is necessary to secure renewable feedstocks and build distribution networks.

Congress last renewed the tax incentive retroactively for 2017, two months after the start of 2018. The tax incentive plays a critical role in drawing blenders to purchase the fuel. Because Congress regularly renews the credit, market pressures force the blenders and producers to build the tax incentive's value into their fuel contracts, even when Congress has allowed the incentives to lapse. Biodiesel and renewable diesel producers and blenders have been operating for 20 months with the expectation that they will eventually be able to claim credits for 2018 and amend their financial statements.

Since the beginning of 2017, biodiesel producers have been forced to put projects on hold and reduce investments, due to uncertainty about renewal of the tax incentive. Today, we've seen half-a-dozen plants announce shutdowns, with more than 200 million gallons of capacity offline and 6,000 workers out of a job. Once producers curtail purchases of raw materials, lay off workers, or slow production, they will be delayed in restarting production as they reestablish supply chains, rehire and train workers, and retool idled facilities. Moreover, many producers will face higher costs for credit lines and capital, which will further delay expansion and upgrade projects.

That economic uncertainty flows throughout local, rural economies. It impacts feedstock purchases, farm equipment purchases, and savings and investment opportunities.

While a long-term extension would provide the necessary policy certainty, our industry urgently needs an immediate extension of the biodiesel tax incentive for 2018 and 2019, at least, to end

the current climate of uncertainty surrounding the industry. We are grateful to Chairwoman Finkenauer for her leadership in championing legislation to provide that certainty.

I would like to emphasize that the biodiesel blender's tax incentive has helped achieve the desired goal of expanding domestic production of clean energy resources and jobs here at home. In turn, the increased use of biodiesel has helped the United States realize economic and environmental benefits. These benefits, however, are in jeopardy without quick reinstatement of the biodiesel tax incentive and stable policy over the long term.

Thank you again for the opportunity to submit this testimony. I would be pleased to serve as a technical resource on the industry as the committee moves forward with its deliberations.



CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

WRITTEN TESTIMONY

Michael Williams
Deputy Director, BlueGreen Alliance
Before the 116th United States Congress, House Committee on Small Business
Subcommittee on Rural Affairs, Agriculture, Trade, and Entrepreneurship
The Economic Opportunities in the Clean Energy Economy
Rayburn House Office Building, Room 2360
Tuesday, September 10, 2019

Thank you Chairwoman Finkenauer, Ranking Member Joyce, and distinguished members of the subcommittee. My name is Mike Williams, and I am the Deputy Director of the BlueGreen Alliance, a national partnership of labor unions and environmental organizations. On behalf of my organization, our partners, and the millions of members and supporters they represent, I want to thank you for convening this hearing today regarding the opportunities that the clean energy economy can provide.

Small businesses are critical to our economy, and a major expansion of clean energy is vital if we are going to succeed in the fight against climate change. It's time we brought this thinking together, and in doing so we must strive to do it right and lift up American workers.

The BlueGreen Alliance unites America's largest and most influential labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment—we can and must have both. And we know that making the kinds of investments needed to grow the clean economy—done right—holds tremendous economic opportunity.

The world's leading scientific organizations have been unambiguous that climate change is a dire and urgent threat and that the longer we delay, the stronger the action required. Over the last decade, we have witnessed the worsening impacts climate change is having on our communities.

At the same time, our nation is struggling with deep and crippling economic inequality. According to the Economic Policy Institute, “the bottom 90 percent of the American workforce has seen their pay shrink radically as a share of total income,” from 58 percent in 1979 to 47 percent in 2015. That is almost \$11,000 per household, or \$1.35 trillion in additional labor income. There is a direct correlation with the decrease of worker power over this time, as the share of workers in a union fell from 24 percent in 1979 to under 11 percent now.ⁱ

Americans face the dual crises of climate change and increasing economic inequality and, for far too long, we’ve allowed the forces driving both crises to create a wedge between the need for economic security and a living environment. We know this is a false choice—we know that we can and must have both, and we need a bold plan to address both simultaneously.

That’s why this summer the BlueGreen Alliance alongside our labor and environmental partners released **Solidarity for Climate Action**, a first of its kind platform to fight climate change, reduce pollution, and create and maintain good-paying, union jobs across the nation.ⁱⁱ

If we do it right, innovating, manufacturing and installing the clean economy can protect the environment while creating quality jobs. Many solutions are already being put into place across the country. For example, tradespeople built the Block Island offshore wind project off the coast of Rhode Island, autoworkers are on the factory floors building cleaner cars and trucks in Michigan, and previously unemployed workers in St. Louis and Los Angeles are gaining access to high-skilled jobs in energy efficiency retrofitting, pipefitting, and transit manufacturing, while companies across the country are manufacturing methane mitigation technologies.

These are all good jobs building a clean energy and climate-resilient economy today. And many of these industries are providing key opportunities for small businesses. Let’s take two examples.

Methane Mitigation

Reducing methane emissions in the United States is a key example of how tackling America’s environmental challenges can also be economic opportunities. Methane is a greenhouse gas that is many times more potent than carbon dioxide and the second largest contributor to climate change, and reducing methane emissions can reap economic benefits for workers and communities across the country.

A BlueGreen Alliance report, *Plugging the Leaks*, estimated that full and continuing adoption of leak reducing technologies and practices at new and modified oil and gas facilities would create over 50,000 jobs over the first decade of full implementation. Many of these jobs are in the methane leak detection and repair industry, a growing field of service providers that utilize technology to identify and repair leaking equipment at industrial oil and gas facilities.ⁱⁱⁱ

Research has found over 130 companies, with customers in almost every state across the country, is in this growing field.^{iv} More than one-third of these businesses were founded within the last six years, and the majority of them are small businesses. And these are good jobs. The median hourly wage for the industry is \$30.88, compared to \$19.60 for all U.S. jobs.^v

Building Clean

Energy efficiency improvements support existing jobs, increase the quality of jobs created, and reduce carbon pollution. Local communities can also capture the benefits of energy efficiency retrofits—including lower utility bills, improved tenant health, and increased economic development.

Small businesses are not only creating the jobs to do this work, but can also reap these same cost and environmental health benefits if they make energy efficiency updates themselves. There are currently over 2.3 million jobs in the energy efficiency sector,^{vi} and roughly 70 percent of these are in small businesses.^{vii}

Furthermore, identifying the supply chain and moving policies to increase domestic manufacturing of energy efficiency retrofit products can also help to create quality manufacturing jobs. The BlueGreen Alliance Foundation's Building Clean program works to identify these products and advance energy efficiency retrofits, particularly for multi-family housing.^{viii} Our database at BuildingClean.org lists roughly 4,500 local manufacturing facilities in nearly every state across the country.^{ix}

In New York State, Flower City Habitat for Humanity helps build affordable housing for communities in Rochester. Through a commitment to in-state sourcing with 95 percent of parts coming from New York manufacturers, Flower City Habitat will be using windows and doors that exceed Energy Star standards at an affordable price. Many of these New York based suppliers are IUE-CWA-represented, supporting quality jobs and local businesses in these communities while reducing emissions.

These kinds of examples demonstrate the opportunity of the clean economy to revitalize American manufacturing, protect the environment, and create quality jobs across the country.

Recommendations

Fully capturing these opportunities must start with two things: 1) an aggressive agenda to regain American leadership in clean technology innovation, deployment, and manufacturing, and 2) an ambitious plan to rebuild and transform America's infrastructure.

American leadership in inventing—and manufacturing—the most advanced technology of all kinds was once a cornerstone of a strong and growing middle class and a pathway for many out of poverty. Innovating, building and installing the clean economy can be a critical pathway to revitalize American manufacturing while protecting the environment and creating quality jobs across the country. We can rebuild American competitiveness in the global economy, and secure and create a new generation of good, middle-class jobs across America through a national strategy to lead in clean and emerging technology production. This must include:

- Major new investments to spur domestic manufacturing and supply chain development in rapidly growing clean technologies, as well as increased funding for research, development, and deployment to ensure that American innovation is translated into good jobs and cutting edge manufacturing in America;
- Investments to transform our existing industries, including investing in efficient domestic materials production and energy-intensive manufacturing to both limit emissions and make them more efficient and competitive globally.
- A focus on environmentally, economically, and socially responsible mining projects, as well as reclamation and recycling initiatives to ensure we're creating the materials necessary for a clean and secure energy future here in the United States;
- Ensuring that trade agreements are enforceable, fair for all workers, and benefit the environment and the climate; and
- Using common sense tax, procurement, trade enforcement, and border adjustments policies to stop offshoring and the leakage of jobs—and pollution—overseas.

Additionally, our nation must move forward with an ambitious plan to rebuild and transform America's infrastructure. If we do it right, this will boost our economy, create millions of jobs, strengthen the resilience of our communities while also reducing pollution and combating climate change. This must include:

- Ambitious and strategic public investments to rebuild and modernize America's infrastructure and make our communities more resilient—repairing our failing roads and bridges, replacing lead pipes and upgrading our water systems, stopping fugitive emissions from existing natural gas distribution pipelines, modernizing our schools, increasing the energy efficiency of new and existing buildings in all sectors from commercial to residential to hospitals and universities, expanding and modernizing our electric grid, building clean and affordable transportation systems, and redeveloping brownfields and cleaning up hazardous waste sites;
- Investment in the revitalization and expansion of the public sector workforce and ensuring staffing levels are sufficient to accomplish clean energy, resilience, adaptation, and crisis response objectives;
- Robust investments in natural infrastructure, including improving climate resilience through natural defenses that act as carbon sinks, recovering America's wildlife, restoring forests and wildlands, reclaiming mines, and addressing the public lands maintenance backlog;
- Vigorous investment in broadband networks to close the digital divide, achieve universal access to high-speed Internet, and full utilization of the federally backed FirstNet network for first responders;
- Adaptation, resilience, and pre-disaster mitigation policies and investments, including sustainable land-use, housing, transportation, and natural infrastructure investments that are equitable, community-driven, and designed to uplift rather than uproot communities;
- Targeted policies and investments to communities with the most need and engaging local organizations to advocate, plan, and sustain positive development outcomes; and
- Prioritization of the use of the most efficient, resilient, and cleanest materials and products with the lowest carbon and toxicity footprints.

Ensuring Quality Job Creation

At the same time, we must ensure that these investments result in quality, family-sustaining jobs. While many clean economy jobs are good, union jobs, too many still are not. Too many companies are offshoring jobs, offering substandard wages, conditions and benefits, or failing to provide safe, healthy workplaces. We cannot rebuild prosperity if working people and the communities they live in fail to see the gains from innovation and a cleaner economy.

Therefore, in addition to investments in innovation, manufacturing, and infrastructure, we need an ironclad commitment to *high-quality* job creation across all sectors of the economy—but especially related to clean energy, adaptation, and resilience. That means a commitment to:

- Increasing union density across the country through strong support of the right to organize throughout the economy, including in the clean technology sectors;
- Applying mandatory labor standards that include prevailing wages, safety and health protections, project labor agreements, community benefit agreements, local hire, and other provisions and practices that prioritize improving training, working conditions, and project benefits. This includes respect for collective bargaining agreements and workers' organizing rights such as neutrality, majority sign-up, and first contract arbitration for construction, operations, and maintenance;
- Raising labor standards in the non-construction sectors through improved wages and benefits and the prioritization of full-time work that eliminates the misclassification of employees and misuse of temporary labor;
- Investing in training, equipment, preparedness, plan development, and other tools including through registered apprenticeship programs to ensure a robust, skilled, and well-prepared workforce to address the extreme weather events and other impacts caused by climate change; and
- Utilizing community benefit, workforce, and other similar agreements that improve access to jobs and career paths, and identify and implement mechanisms to ameliorate and improve local economic and environmental impacts, particularly in low-income communities and communities of color.

In closing, I want to reiterate that growing the clean economy—if done right—is a significant opportunity to ensure a more equitable society, increase U.S. global competitiveness, support and grow small businesses, and create quality, good-paying, union jobs across the country.

We look forward to working with this Committee as you move forward your agenda for the 116th Congress. Thank you again for the opportunity to testify today.

ⁱ Economic Policy Institute, "What labor market changes have generated inequality and wage suppression?" December 12, 2018. Available online: <https://www.epi.org/publication/what-labor-market-changes-have-generated-inequality-and-wage-suppression-employer-power-is-significant-but-largely-constant-whereas-workers-power-has-been-eroded-by-policy-actions/>

ⁱⁱ BlueGreen Alliance, "Solidarity for Climate Action," June 2019. Available online: <https://www.bluegreenalliance.org/solidarity>

ⁱⁱⁱ Environmental Defense Fund, "How Reducing Methane Emissions Creates Jobs," March 2017. Available online: <https://www.edf.org/how-reducing-methane-emissions-creates-jobs>

^{iv} Ibid.

^v BlueGreen Alliance, *Plugging the Leaks: Protecting Workers, Reducing Pollution, And Creating Quality Jobs By Reducing Methane Waste In The U.S. Oil And Gas Industry*, September 2016. Available online:

<https://www.bluegreenalliance.org/pluggingtheleaks>

^{vi} National Association of State Energy Officials, *The 2019 U.S. Energy and Employment Report*. Available online:

<https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c6171/5c7f3708fa0d6036d7120d8f/1551849054549/USEER+2019+US+Energy+Employment+Report.pdf>

^{vii} Environmental Entrepreneurs, *Energy Efficiency Jobs in America*, December 2016. Available online: https://e4thefuture.org/wp-content/uploads/2016/12/EnergyEfficiencyJobsInAmerica_FINAL.pdf

^{viii} BlueGreen Alliance Foundation, "Building Clean." Available online:

<http://www.buildingclean.org>

^{ix} Ibid.



Growing the Clean Energy Economy

**Testimony of David Spigelmyer, President
Marcellus Shale Coalition
before the Subcommittee on Rural Development, Agriculture, Trade and
Entrepreneurship,
U.S. House Committee on Small Business
September 10, 2019**

Chairwoman Finkenauer, Ranking Member Joyce, and members of the House Subcommittee on Rural Development, Agriculture, Trade and Entrepreneurship, thank you for the opportunity to testify today. My name is David J. Spigelmyer, and I serve as President of the Marcellus Shale Coalition (MSC). The MSC is a Pennsylvania-based statewide trade association representing energy producing, midstream, transmission and supply chain businesses who are fully committed to working with local, county, state and federal government officials to facilitate the safe development of natural gas resources in the Marcellus, Utica and related geologic formations.

I am grateful to be here with you today for this critical and timely conversation about supporting our nation's pursuit of a thriving clean energy economy that prioritizes innovation, job growth and a sustainable energy future. Our country's energy landscape has changed dramatically over the past decade, and our members are proud to be part of that transformation.

With the innovation that has enabled access to deep shale formations in the Appalachian Basin, our region has experienced tremendous job growth, and the natural gas we are producing in Pennsylvania has driven unprecedented environmental gains that are enhancing air quality and making clean energy more affordable for the small businesses that need it. Furthermore, natural gas is the ideal fuel to provide the necessary backup required for interruptible sources of renewable energy to contribute to our electric grid.

How Shale Revolutionized Our Economy & Environment

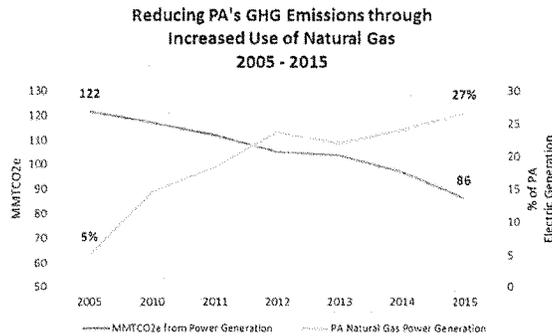
The words "shale revolution" are probably familiar to you, and I am here to tell you that our country's security, as well as economic and environmental progress is in large part owed to it. In Pennsylvania alone, our industry supports over 300,000 direct and indirect jobs and contributes \$45 billion to our state's economy, according to PricewaterhouseCoopers. From Pennsylvania's labor community that celebrates bustling union halls at full employment, to new members being trained – jobs are being generated to modernize our nation's energy infrastructure. Our building trades are constructing new power generation facilities, fractionators, pipelines and a world-class petrochemical complex west of Pittsburgh in Beaver County. There are also countless small business owners whose entrepreneurial spirit has seized the opportunities presented by this industry. In our state's agricultural sector, proceeds from natural gas development have saved family farms. Indeed, natural gas has provided a rising employment and economic tide that has lifted us all.

As the shale industry advances, Pennsylvania ratepayers have witnessed historic reductions in natural gas commodity prices that have been a major economic driver for small business across the state. Natural gas commodity prices for end-use customers are down 56% - 76% since 2008, and wholesale electric prices in PJM are down 41% since 2008, saving the average household between \$1,200 and \$2,500 annually, according to the Pennsylvania Public Utility Commission. For small businesses operating on thin profit margins, these savings are even more significant, allowing them either to reinvest in their businesses or hire more workers.

Pennsylvania's economic strides have been met with equally impressive air quality achievements¹. Thanks to innovations in technology, tightening environmental performance standards and increased use of natural gas:

- Volatile Organic Compounds emissions, affecting respiratory health, are **down 51%** between 1995 and 2015;
- Sulfur dioxide emissions, which contributes to acid rain, are **down 82%** between 1990 and 2015; and
- Nitrogen oxide emissions, affecting respiratory health, are **down 72%** between 1990 and 2015.

Additionally, in Pennsylvania, carbon dioxide (CO₂) emissions from the electric power generation sector, where natural gas is playing a bigger role than ever before, are **down 30%** since 2005 (through 2015).



Nationally, according to the U.S. Environmental Protection Agency, in 2017 total greenhouse gas emissions across the United States reached their lowest levels in 25 years, propelling the U.S. to the world leader in CO₂ emissions reductions. This is not despite the shale revolution but rather *because* of it.

¹ PA Department of Environmental Protection – Stationary Source Emission Inventory 2012-2015



Clean Energy Economy Starts with Natural Gas

Natural gas is the most reliable and affordable partner for growing a clean energy economy. When intermittent renewable resources are unavailable, dependable baseload power is essential. Natural gas generators can scale up rapidly to meet demand, making natural gas a critical partner with renewable energy. Indeed, according to the International Energy Agency, "natural gas has an important role to play in complementing low-carbon energy solutions by providing the flexibility needed to support a growing renewables component in power generation."

Further, as small businesses in the clean energy space seek to innovate, manufacturing new products and technologies that will enhance our environment and quality of life, the affordability of natural gas as a manufacturing fuel source has been and will continue to be a major contributor to their long-term viability and success.

Without a doubt, any conversation about clean energy must be grounded in the partnership that will make its future possible. Supporting a thriving natural gas industry – from production to pipeline deployment to its growth in electric generation – should be a core focus of any public policy discussions aimed at building upon the progress our industry has realized for Pennsylvania and the nation.

Conclusion

As you continue to explore how Congress can best support the growth of our nation's clean energy economy, I appreciate the recognition of this subcommittee that natural gas is a vital component.

On behalf of our members and the thousands of men and women who work in Pennsylvania's natural gas industry, thank you for having me here today, and I look forward to answering any questions you may have.

