

THE CLEAN ENERGY RECOVERY: CREATING JOBS, BUILDING NEW INDUSTRIES AND SAVING MONEY

HEARING BEFORE THE SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL WARMING HOUSE OF REPRESENTATIVES ONE HUNDRED ELEVENTH CONGRESS

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WEDNESDAY, MARCH 10, 2010

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON ENERGY INDEPENDENCE
AND GLOBAL WARMING,
Washington, DC.

The committee met, pursuant to call, at 9:35 a.m., in Room 2141, Rayburn House Office Building, Hon. Edward J. Markey (chairman of the committee) presiding.

Present: Representatives Markey, Inslee, Herseth Sandlin, Cleaver, Speier, Sensenbrenner, and Capito.

Staff present: Jonathan Phillips.

The CHAIRMAN. Welcome, ladies and gentlemen, to the Select Committee on Energy Independence and Global Warming.

I think it is appropriate to begin this hearing today on the Recovery Act with a reflection on where our Nation stood 1 year ago. Our economy was in a free fall. The Dow was below 6500, down 54 percent from its high. Less than 2 months into the Obama administration, unemployment had already hit a 25-year high. People stopped looking at their 401(k) statements, spending froze, businesses shuttered, credit disappeared, and everyone wondered when the downward spiral would end.

While the Nation's collective economic security was disappearing before our eyes, many of the pillars of American strength have been quietly decaying in the shadows for decades. Roads and infrastructure were crumbling, schools were sinking deeper into mediocrity, our middle class was losing ground. At the same time, China, Germany, and other nations were racing past us in the 21st century's greatest growth industry, clean energy.

Amidst this storm, Congress passed the American Recovery and Reinvestment Act; and it became law on February 17, 2009. As a result, two million people have jobs today that otherwise would not. This emergency legislation has not only helped us round the corner on the worst recession in generations, it has become the catalyst for reinvesting in America's future.

Nowhere is this reinvestment more apparent than in clean energy, where the Recovery Act targeted \$90 billion to jump-start jobs in efficiency, wind, solar, advanced battery technology, and countless other critical industries.

Equally important, these investments are laying the foundation for a new era of innovation and technology development that will

provide the next generation of Americans with economic security and job opportunities over the long term.

While we still have a long journey ahead of us, I think we need to take stock of how far we have come with the Recovery Act.

A decade ago, we had a grand total of 450 megawatts of solar electricity installed in the United States. Flash forward. We installed 480 megawatts of solar in 2009 alone. In 2010, the solar industry is likely to bring on line the likely equivalent of a nuclear power plant. Solar energy programs in the Recovery Act supported more than 10,000 new jobs in 2009, and it is likely to support another 30,000 in 2010.

Then there is wind. Four years ago, 25 percent of the components of a wind turbine was made in America. Today, more than 50 percent is made in America. Annual additions of wind power have quadrupled during that time, from less than 2,500 megawatts in 2005 to nearly 10,000 new megawatts installed in the United States in 2009. When the wind factories supported by the Recovery Act come on line over the next couple of years, the average content is likely to be over 70 percent in these wind facilities.

Then we have the advanced batteries that are going to power the electric vehicles rolling off assembly lines later this year. Asia owns 98 percent of that market today. With Recovery Act investments, the U.S. global markets share is projected to raise to 20 percent next year and 40 percent by 2015. Imagine the jobs that will be created when we stop sending \$250 billion a year overseas for oil and start sending money to the workers in Michigan and Ohio who are building our electric batteries. Make no mistake, clean energy industrialization is happening in America, and the Recovery Act is playing a major part.

Public investment in innovation is a proven all-American pathway to long-term economic security and job creation. The public investment behind Neil Armstrong's one small step spurred giant technological leaps that ensured American economic security for generations.

The Recovery Act reoriented America to the future and refocused our efforts and our strengths. Our strength is our ability to innovate. As we move forward into a clean energy future, we will wean ourselves from our greatest weakness: addiction to oil. The Recovery Act laid that foundation. A long-term policy like the Waxman-Markey bill, which the House passed last June, will ensure that the thousand flowers of the Recovery Act are likely to fully bloom.

That completes the opening statement of the Chair.

I now turn and recognize the ranking member of the committee, the gentleman from Wisconsin, Mr. Sensenbrenner.

[The prepared statement of Mr. Markey follows:]



THE SELECT COMMITTEE ON
ENERGY INDEPENDENCE AND GLOBAL WARMING

Statement of Chairman Edward J. Markey (D-MA)

**“The Clean Energy Recovery: Creating Jobs, Building New Industries
and Saving Money.”**

**Select Committee on Energy Independence and Global Warming
Wednesday March 10, 2010**

I think it is appropriate to begin this hearing today on the Recovery Act with a reflection on where our nation stood one year ago today. Our economy was in free fall. The DOW was below 6500, down 54 percent from its high. Less than 2 months into the new Obama administration, unemployment had already hit a 25-year high.

People stopped looking at their 401(k) statements. Spending froze, businesses shuttered, credit disappeared and everyone wondered when the downward spiral would end.

While the nation's collective economic security was disappearing before our eyes, many of the pillars of American strength had been quietly decaying in the shadows for decades. Roads and infrastructure were crumbling. Our schools were sinking deeper into mediocrity. Our middle class was losing ground. At the same time, China, Germany and other nations were racing past us in the 21st Century's greatest growth industry: clean energy.

Amidst this storm, Congress passed the American Recovery and Reinvestment Act and it became law on February 17, 2009. As a result, 2 million people have jobs today that otherwise would not. This emergency legislation has not only helped us round the corner on the worst recession in generations, it has become the catalyst for re-investing in America's future.

Nowhere is this re-investment more apparent than in clean energy, where the Recovery Act targeted \$90 billion to jump start jobs in efficiency, wind, solar and advanced battery technology, and countless other critical industries. Equally important, these investments are laying the foundation for a new era of innovation and technology development that will provide the next generation of Americans with economic security and job opportunities over the long-term.

While we still have a long journey ahead of us, I think we need to take stock of how far we've come with the Recovery Act.

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Make no mistake: clean energy industrialization is happening in America and the Recovery Act is playing a major part.

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Mr. SENSENBRENNER. Thank you very much, Mr. Chairman.

You never have to admit you are wrong if you always argue that things could be worse. The unemployment rate is hovering around 10 percent, and the economy has lost around 3.3 million jobs since Congress passed the \$862 billion stimulus bill. But the majority has still convened today's hearing to celebrate the bill as a success. No matter how sluggish our economy gets, they always can pretend that things are better than they could have been.

I am still hopeful that last year's \$862 billion stimulus bill will help get people back to work. But this is mostly wishful thinking. Evidence already shows that this massive government program is unlikely to produce any significant growth in the workforce. There are good intentions behind some of these so-called green jobs projects, but we also need accountability.

The stimulus program was a failure, and we need an honest accounting as to why.

Spending government money can create jobs, but most of these jobs are entirely dependent upon the government's subsidies. Take away the subsidy, the job goes, too. Based on per unit of energy output, wind and solar energy products received 50 times more subsidy than coal. The subsidies required to create these green jobs result in the loss of economically sustainable jobs in other industries. Experiences abroad have already documented this fact.

Spain spent \$1.6 billion to subsidize its solar industry. A study from a Spanish university, however, found that for every job this money created, it cost the economy 2.2 jobs in other industries. The same study also found that 9 out of 10 jobs created by the subsidies were temporary in nature.

The Obama administration immediately attacked the study, but critics must account for the fact that, since implementing the subsidies, the unemployment rate in Spain has climbed to nearly 20 percent. I know the playbook is to argue that things would have been worse without the subsidies, but when one in five people are unemployed, how much worse can it get?

The administration was so frightened by the Spanish statistics that it took what the Department of Energy employees described as an unprecedented step of issuing a direct rebuttal. DOE contracted with a national renewable energy lab to produce a response to the Spanish study. Documents obtained through a FOIA request by the Competitive Enterprise Institute made it clear that the administration's rebuttal was written in conjunction with wind lobbyists and other advocacy groups. This blatant conflict of interest not only undermines the integrity of NREO's attack but also exposes the agenda of the report sponsors.

Unfortunately for us, the stimulus bill might actually be of some help to Spain. The Investigative Reporting Work, a product of the School of Communication of American University, found that a majority of the program's grants went to foreign-owned companies and that a majority of the turbines purchased with the money were built by foreign manufacturers. The workshop found that of the \$1.05 billion in clean energy grants handed out by the government since September 1, 84 percent—a total of \$749 million—have gone to foreign wind companies. The Spanish utility company Iberdrola,

SA, alone has collected \$545 million through its American subsidiary.

In response to a letter from Democratic Senators criticizing the stimulus program, Secretary Chu wrote that all the wind turbine installation jobs are created here in America. So we are spending U.S. taxpayer money to create long-term manufacturing jobs abroad and consoling ourselves because we are also creating a few short-term construction jobs here at home.

The job creation benefits of the stimulus package were further undermined by the Democrats' political alliance with unions. The Government Accountability Office recently found that the pro-union Davis-Bacon language in the stimulus bill meant Energy Department officials have to spend valuable time determining the prevailing wages for these so-called green jobs. This bureaucratic exercise cost valuable time during a period where many Americans needed the work.

In the case of weatherization, the Energy Department spent only 8 percent of the nearly \$5 billion budgeted to improve energy efficiency in homes across the country. Indeed, a study by the Heritage Foundation shows that Davis-Bacon rules require government contractors to pay wages that average 22 percent above the market rate, and suspending Davis-Bacon rules would let the government hire 160,000 additional workers.

I am glad that Brian Johnson of Americans for Tax Reform is here to tell us more. He will testify that Davis-Bacon rules reduced the jobs-creating benefits that the stimulus bill sought to create. The question is what are the priorities of the authors of the stimulus bill.

I also want to welcome Mary Ann Wright of Johnson Controls, who are based in my district, and thank her and her company for their work in cutting-edge battery power. I believe the only way we can confront climate change is through technology breakthroughs, and I am in fact a lead author and original sponsor of the Hybrid Truck Act, which has twice passed the House.

I hope this hearing proves to be the beginning of legitimate oversight, rather than an attempt to spin ineffective policies.

I yield back the balance of my time.

The CHAIRMAN. The gentleman's time has expired.

The Chair recognizes the gentlelady from South Dakota, Ms. Herseth Sandlin.

Ms. HERSETH SANDLIN. I thank the chairman for holding this hearing giving us this opportunity to examine how the Recovery Act has played a key role in maintaining and fostering the new energy economy.

I supported the Recovery and Reinvestment Act in order to prevent the worst recession since World War II from lasting longer and going deeper, to build infrastructure and invest in other ways in the future of South Dakota and the country.

As an example, South Dakota has already been allocated \$9.6 million in Recovery Act smart grid funding, Batros Power in the western part of the State is slated to receive \$5.6 million in Recovery Act funds, with 50 percent cost share to install smart metering technology, and Sioux Valley Energy Electric Cooperative was awarded \$4 million to install SMART meters.

As virtually every economist agrees, we needed an aggressive recovery package to stem the loss of jobs, to save jobs, to create jobs, and to reinvigorate demands for goods and services that had evaporated in the economic collapse triggered by the financial meltdown originating from risky and unconscionable actions on Wall Street. Our Nation was in a free fall, losing hundreds of thousands of jobs a month, and we needed to act. As South Dakota's Republican governor has said, the Recovery Act played a key role in balancing South Dakota's budget in multiple years, while reducing cuts to critical programs as our State suffered from the downturn.

Moreover, one of the key components of the Recovery Act conveniently overlooked by its critics is over a third of it is tax cuts for families and businesses, including a long-term extension of the production tax credit for wind through 2012, a tax credit of up to \$800 per family for 2009 and 2010, tax relief for small businesses, and a cut in the capital gains tax for those who invest in small businesses.

In addition, I have met with homegrown wind developers and other domestically headquartered wind blade manufacturers who have brought hundreds of jobs to South Dakota who have praised the Recovery Act's extension of the production tax credit and the new Treasury grant in lieu of the investment tax credit included in the Recovery Act. I have heard firsthand how these measures are allowing the survival of domestic wind development in the United States, creating jobs and fostering economic development in rural communities.

So I thank you again, Mr. Chairman, for holding this hearing and look forward to the testimony of our witnesses today.

The CHAIRMAN. The gentleman from Missouri, Mr. Cleaver, is recognized.

Mr. CLEAVER. Thank you, Mr. Chairman.

I think it is important for us to take a look at the impact of the ARRA legislation.

Mr. Chairman, I was in the room as a member of the Financial Services Committee. I was sitting there when President Bush's Secretary of the Treasury, Hank Paulsen, along with Ben Bernanke, along with Mr. Cox, our former colleague, and Sheila Bair sat at a table not dramatically unlike the table before us today; and from their lips fell the most bone-chilling testimony I have ever heard since being in government.

They explained to us that if the Fed did not act quickly that the U.S. economy would fall from the precipice, taking with it the economy of the planet. President Bush pushed hard to take action, and I don't disagree. And we took action. We then, after electing President Obama, began to address this problem that was deepening even after trying to put a tourniquet on the Wall Street entities that could have also taken down other financial institutions around the country.

President Obama put forth a stimulus package. Some, like Paul Krugman, the Economist journalist, believed that it was too small, that you can't have a \$15 to \$17 trillion economy and try to completely turn things around with less than a trillion dollar stimulus. Nonetheless, we approved it, and I supported it and supported it strongly.

If you look at the job losses in the United States over the last decade, you would be alarmed. Because many of those jobs, even after this recession ends, will not return. And I fear that the 3.5 unemployment, full employment number, is going to have to be adjusted, that no longer can we expect full employment to be when 3.5 percent of the American public is unemployed. That is probably going to go up after this recession is over. So the only thing remaining for us to do is to create new jobs, and ARRA gave us the opportunity to create new jobs.

In Kansas City, Missouri, one of the cities I represent in Missouri, we used the money to create what is called the Green Impact Zone, 150 blocks of the most decrepit piece of geography in urban America. One census tract shows unemployment at 70 percent. The Kansas City Star did a story on this tract and called it the Murder Factory.

We have been able, since ARRA, to get a matching grant from the Department of Energy to match a \$24 million grant from our power and light company to begin the construction of a smart grid. Men and women are hired today, this day, who live in the Green Impact Zone who will be a part of the construction team for the smart grid. And we are weatherizing 3,000 homes, and the men and women doing the weatherization are men and women who are unemployed, and, yes, some of them were union members.

The point is, as I close, Mr. Chairman, that this is working and working well.

Thank you, Mr. Chairman.

The CHAIRMAN. I thank the gentleman.

The gentlelady from California, Ms. Speier.

Ms. SPEIER. Thank you, Mr. Chairman.

I am glad that we are here today to discuss clean energy jobs which are crucial not only for our economic recovery but for our long-term economic growth.

On Monday of this week, I organized a bus tour to inspect the progress of recovery projects in my district. From 300 construction jobs at San Francisco Airport, job training for transportation workers, new buses fueled by biofuel, aid to services for the unemployed, and a collaborative partnership to secure \$2 million in grants to rehouse the homeless, I can see the impact of timely and targeted recovery funding working in my district.

What was very interesting during the tour was I visited a company that built super-efficient surge protectors for our electric grid to shield consumers from blackouts. The company received 8.5 million ARRA grant dollars to fund an installation in southern California and has already expanded its headquarters to a larger facility. One thing they pointed out to me, though, was that there is no testing facility in the United States. So they have to actually transport this huge piece of equipment to Vancouver to test it, another opportunity for us to start growing some of these opportunities at home.

Another company based in south San Francisco received \$21 million in recovery funding to build an advanced biofuels refinery in Pennsylvania which will create jobs in both locations and will help them scale up production of a cutting-edge renewable biofuel which will help us break our addiction to oil.

Finally, my district is home to the Nation's leading solar power provider for homeowners on up to Federal Government, and thanks to the Recovery Act policies for renewable energy providers that has ended its hiring freeze and plans to add 16 new solar installation crews in the coming months.

I know we have much to hear from our witnesses, and I yield back.

The CHAIRMAN. The gentlelady's time has expired.

The Chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. I want to make a point about—maybe someone has already said it—I just met a woman named Elana Meyers, who was our Gold Medal winner in the bobsled competition in Vancouver; and it was the first time I ever got to hold a Gold Medal. It was pretty cool. But it made me think about another competition we are in about who is going to get the Gold Medal in the clean energy economy. And if it wasn't for ARRA, we would be giving a huge head start to China. ARRA allowed us to get out of the chute, at least to begin getting into this competition with the rest of the world to see who is going to be preeminent in clean energy.

And I just want to make two points about why ARRA was successful in getting us into the race, two companies I will mention.

I met a fellow from Johnson Controls the other day who said they are going to start building a lithium ion battery manufacturing plant in Michigan, hopefully construction this fall, which would not have happened but for ARRA. And we would not have any meaningful manufacturing plant in the United States but for ARRA in this regard.

And in the R&D provision, we have a company called Energy II. It is in Seattle. It has got a \$20 million-plus grant to fund ways to use nanotechnology to make ultra capacitors 15 times more efficient and more dense.

So ARRA has got us into the race. We are in the race, and we wouldn't have been for it, and I am glad we are in the race.

The CHAIRMAN. And the gentleman's time has expired.

Maybe what we could do is hear from Johnson Controls. The gentleman from Washington State has, as you know, given Johnson Controls a little bit of a plug here. So while the gentleman is here—we apologize to the other witnesses who have been told what the order will be—I thought maybe we could start with you, Mary Ann Wright, Vice President of Johnson Controls and Managing Director of the company's Business Accelerator Project for advanced energy storage solutions. Perhaps you could expand upon what Mr. Inslee was just referring to.

STATEMENTS OF MARY ANN WRIGHT, VICE PRESIDENT AND MANAGING DIRECTOR, JOHNSON CONTROLS, INC.; PAUL GAYNOR, CHIEF EXECUTIVE OFFICER, FIRST WIND; LISA PATT-McDANIEL, DIRECTOR, OHIO DEPARTMENT OF DEVELOPMENT; BRYAN ASHLEY, CHIEF MARKETING OFFICER, SUNIVA, INC; AND BRIAN M. JOHNSON, FEDERAL AFFAIRS MANAGER, AMERICANS FOR TAX REFORM

STATEMENT OF MARY ANN WRIGHT

Ms. WRIGHT. Chairman Markey, Congressman Sensenbrenner, and the rest of the members, thank you very much for inviting us here to tell you what we are doing with our Recovery matching grant; and I also appreciate that you did it today because I have to head back to Milwaukee and greet all of my new employees in Milwaukee that we are hiring as a result of the work we are doing in the United States.

I have three things that I want to talk about. One is the state of the industry in general, number two is what we are doing with our stimulus grant, and number three is the challenges that we face.

I think you have a packet of some pictures. It is also in the written testimony, and I would like to kind of talk you through this. Because if you look at this, what should pop out at you is it is a pretty scary picture.

If you take a look over in the right, a cell, which is this—and there is about 100 to 200 of them in these electric vehicles—50 to 75 percent of the value is in the cell. All of these materials come from virtually the Pacific Rim who has a stranglehold on the supply base. Over on the left-hand side is the system, and that is where we put the cells and integrate it and put it into the vehicle.

And if you think about this for a minute, if we don't change this, we will change our oil cartel, our OPEC oil cartel for an Asian battery cartel. And to scare you a little bit more, our Pacific Rim friends aren't standing still. They continue to invest in manufacturing capability, technology, and capacity.

In 2008, Johnson Controls opened up the world's first lithium ion manufacturing facility for automobiles in Nersac, France, in 2008. Out of that facility, we supply on a mass production scale Daimler and BMW. For pre-production, we support our customers Ford, Azure Dynamics, Jaguar, Land Rover, and Volkswagen.

In 2009, we were the recipient of a stimulus grant. And the key thing that I would like you to take away—and Congressman Inslee, you stole my thunder—and the fact is, in the absence of this grant, we would not have expanded our manufacturing in the United States. We were looking in Europe and in Asia, but, because of this action, we are going to build our first manufacturing facility in Holland, Michigan. As a matter of fact, it is up. We are retrofitting it, and we will begin production later this year for one of our customers and begin full-scale cell production next year. We are moving fast, we are moving decisively, and we are very encouraged by the actions that the legislature has taken.

I think also—and it may be something Congressman Inslee doesn't know—that by 2012 we will move and transition all of our European production into this U.S. facility, and I think that is a

real feather in our cap versus what is typically happening in our economy.

When we were awarded our grants, our commitment wasn't just to put up a plant but that we would help stand up an industry; and that involves everything from our raw materials suppliers all the way to our end-of-life recycling infrastructure.

Johnson Controls presently is the largest provider of your starter batteries and the largest recycler of these batteries as well, so we are going to build on those capabilities of a long-standing, mature company and industry to be able to transition that into lithium ion.

But if you think about the materials for a moment, as I said, most of those comes from the Pacific Rim. One of our commitments is to develop a domestic supply base. I am very happy to let you know that we have recruited two Asian suppliers to the United States who will be setting up business in Michigan and supplying the U.S. market. We need to continue to develop a domestic supply base as well.

We have great partners in Ford Motor Company, Azure, Daimler, BMW. We have terrific long-standing partnerships with Argonne National Laboratory in Oakridge to continue our work on our technology.

In Milwaukee, which is our headquarters for this business, we have stood up a team called the accelerator team, which I lead; and our job is to accelerate the demand creation and the technology and innovation so that we can have a sustainable business that does not rely on subsidies and incentives, that can be profitable.

So while we have customers, this is terrific. We have some great partners. We have an issue. And one of the graphs that I gave you was the demand. And if you take a look out in the 2015 time frame, we believe there will be about 4 million units of global capacity versus 2 million units of demand. In North America alone, there will be about 2 million units of capacity and 800,000 units of demand. We have got to find a way to fill that gap.

Transition of government fleets is going to be an important piece of that because, one, it allows us to drive scale, which is a key part of our business equation and, number two, we have over a million units in these fleets in the GSA and Postal Service which are perfectly suited because—I am running out of time.

Respectfully, I want to leave you with one key piece, however, is that we need to make sure we leverage these recovery investments as we transition these fleets and as we build our industry. Shouldn't we give preference to vehicles that are built with batteries and electric drive components that come from investments that we made here in the United States so that we don't allow these vehicles and this industry to transition from a Middle Eastern OPEC to an Asian battery cartel?

Thank you very much.

[The statement of Ms. Wright follows:]

**Testimony of Mary Ann Wright
Johnson Controls, Inc.**

**Before the United States House Select Committee on
Energy Independence and Global Warming**

**Hearing on The Clean Energy Recovery:
Creating Jobs, Building New Industries and Saving Money**

March 10, 2010

Mr. Chairman and members of the Committee, my name is MaryAnn Wright. I am the Vice President and Managing Director, Business Accelerator Project, Johnson Controls, Inc. In addition to being the world's largest provider and recycler of starter batteries, we are the leading independent supplier of battery systems for hybrid vehicles, plug-in hybrid vehicles, and electric vehicles.

I greatly appreciate the opportunity to discuss with you today the current status of our American Recovery and Reinvestment Act grant, the opportunity it is creating and the challenges we face. I am honored that you have asked me to speak before you today regarding the domestic advanced battery industry, a topic which is critical to the security, economic vitality, and environmental stability of our country and planet.

I would like to address three main points in my testimony:

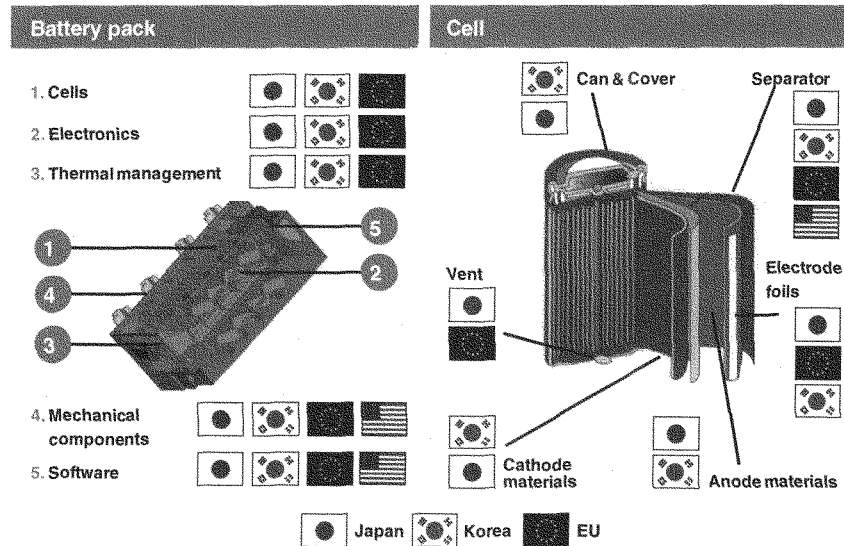
1. The current state of the advanced battery industry globally;
2. Where we are in executing our Recovery Act grant; and
3. The industry's challenges.

Current State of the Advanced Battery Industry

Today, nearly all the batteries for hybrid electric vehicles and plug-in electric vehicles, along with the materials and equipment to manufacture them, are made in Pacific Rim countries. Also, most of the other key electric power train components are available today only from offshore sources, primarily in Asia.

Without a domestic manufacturing and supply base for advanced battery systems, America's energy security will continue to be held hostage, exacerbating our economic problems, most notably our vanishing manufacturing base and corresponding massive trade deficit. As we begin to replace petroleum with electricity to power our vehicles, America must not swap today's foreign oil cartel for a foreign battery cartel.

Below is a representation of the country of origin of the critical materials and components for a lithium-ion battery pack and its individual cells. It is not a pretty picture because most of the key supply base is in foreign countries.



Moreover, our foreign competitors are not standing still. Other countries are making huge investments to seize the opportunity to shift from fossil-based fuels and embrace electrified vehicles and new battery technology. We must reverse the decline in domestic manufacturing investment and eliminate the malignant transfer of our national wealth that results from our purchase of foreign energy.

Fortunately, we have taken an important step to address this problem through the Recovery Act grant awards for electric drive vehicle battery and component manufacturing. I am pleased to say that Johnson Controls was one of nine advanced battery manufacturing grant recipients under this important initiative. Let me provide a status update on our first lithium-ion automotive battery manufacturing plant in the United States.

Our New Li-Ion Battery Production Facility

As background, Johnson Controls, in a joint venture with Saft America, named Johnson Controls-Saft Advanced Power Solutions, launched the world's first automotive lithium-ion cell manufacturing and battery assembly facility in Nersac, France in 2008. That facility is currently mass producing lithium-ion cells and packs for Mercedes and BMW hybrid vehicles.

In August 2009 we were awarded a Recovery Act matching grant to create an advanced battery manufacturing industry in the United States. This grant, along with significant incentives from the State of Michigan, played a key role in our decision to build a manufacturing plant for advanced batteries in this country. Without this support from the DOE, we would have likely expanded our manufacturing footprint in Europe or Asia. As a result of the Recovery Act grant, we also re-located our electronics engineering from France to Holland, MI creating new, high quality jobs.

It is important to understand that we are not just building a domestic advanced battery manufacturing plant. We are also building a domestic supply chain and recycling infrastructure for the manufacture of lithium-ion batteries for electric drive vehicles.

This initiative includes suppliers of critical materials and components in addition to U.S. equipment suppliers for the specialized machinery the industry will need. To date, we have helped recruit two Asian materials suppliers to the U.S. (Michigan). We have formed strategic partnerships with global battery recyclers to implement battery collection, transportation, recycling and material recovery and reuse processes. Presently, Johnson Controls is the world's largest recycler of lead-acid (starter) batteries. We have a mature infrastructure that includes coordinated fleets for delivery of new batteries coupled with pick-up and reverse distribution of spent batteries to our recycling partners. We will leverage this successful template to develop the technology and capability to replicate a close-loop process for the lithium-ion industry. We have contracted with an equipment manufacturer in our home state of Wisconsin to supply the coating and drying line -- one of the most critical machines used in the process of making lithium-ion cells.

For the cells alone, there are nine major components that will be sourced on-shore as the result of our decision to produce this technology in the United States, a decision catalyzed by the Recovery Act funding:

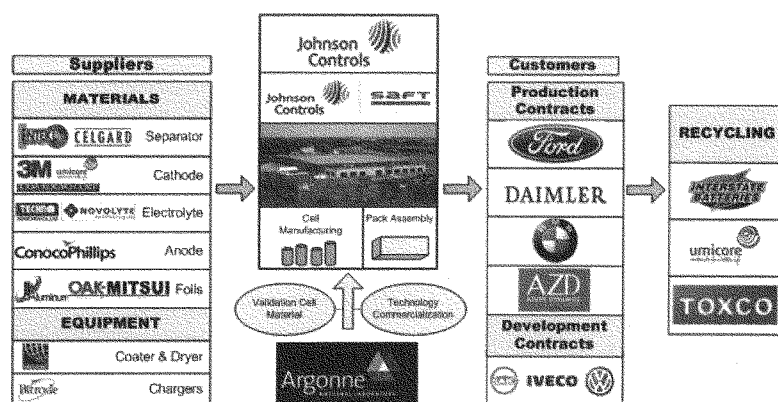
- 1) aluminum foil
- 2) copper foil
- 3) cathode powder
- 4) anode powder
- 5) separator
- 6) electrolyte
- 7) container/cover
- 8) binder
- 9) solvent

It is important to note that some of these materials, the cathode powder in particular, represent the vanguard of materials science and advanced process technologies that will help the U.S. regain its position as the most innovative country on earth.

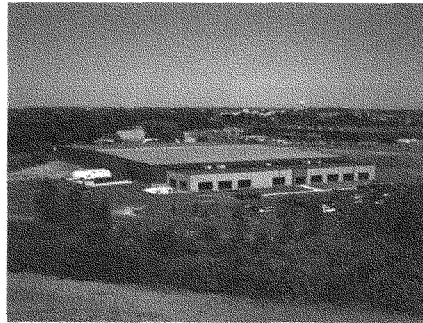
The Recovery Act funding for advanced battery manufacturing is stimulating economic activity in many industry sectors including one of strategic importance – the development of a lithium mine in northern Nevada. Currently, global reserves of lithium metal equivalent are estimated at 31 million metric tons. The mine in northern Nevada will add another 2.2 million metric tons to this total or approximately 7%. Moreover, this new mine will add 40% to the current North American reserves of 5.7 million metric tons.

Our technology partners include the Department of Energy's Argonne National Laboratory, who will help us accelerate commercialization and validation of cell materials. We also have partnered with the DOE's Oak Ridge National Laboratory under a separate contract to validate and implement manufacturing process enhancements for lithium-ion cells. Ford Motor Company, a sponsor of both our Michigan incentive award as well DOE Recovery grant, awarded Johnson Controls-Saft the development and production contract for their PHEV program launching in 2012.

We have established commercial viability through customers who have awarded us long-term production contracts. We have production contracts with Ford, Daimler, BMW and Azure Dynamics. Notably, we have pre-production development contracts with several global customers, including Jaguar Land Rover and Volkswagen, in support of their production program plans. Below is a diagram of our advanced battery initiative funded in part by the Recovery Act grant.



We have chosen an existing manufacturing location on our technical campus in Holland, Michigan to site the plant. We are drawing on a workforce from an area rich with skilled automotive workers. Through the reemployment of local talent, we will help reverse the recent trend of job loss in the automotive industry generally and the Midwest specifically.



Johnson Controls Li-ion Cell Manufacturing and Battery System Assembly Plant, Holland, Michigan

This investment is an important step toward creating and building an industry in the United States that addresses market requirements and long-term opportunities for growth and new jobs in this country. Construction of our plant in Holland, Michigan is progressing as planned with battery pack assembly set to begin in August of this year and cell production starting in 2011.

We will support several important customers from this facility. Johnson Controls is the exclusive supplier for the complete battery system for Ford Motor Company's first series production plug-in hybrid electric vehicle (PHEV), which will be introduced in 2012. In October it was announced that we will supply batteries for the Ford Transit Connect commercial van in 2010 in collaboration with Azure Dynamics. We are working with Azure to supply batteries for other commercial delivery trucks that will start in production in 2010. In addition, we will transfer to the U.S. our production of batteries for the Mercedes S-Class and BMW 7-Series mild hybrids, presently produced in France.

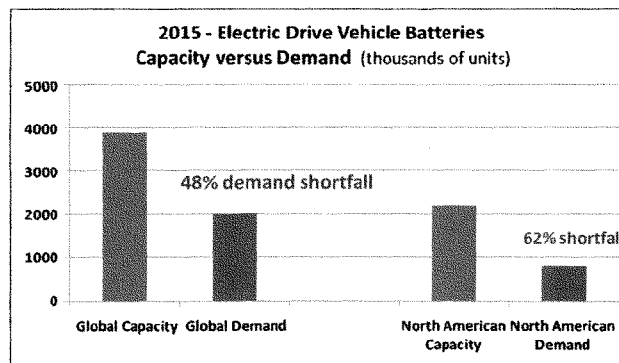
Earlier I spoke about the importance of re-establishing the United States as the world leader in transferring R&D innovations into commercially successful products – manufactured in the U.S. As part of Johnson Controls corporate commitment to support this initiative we have created a Hybrid Battery Business Accelerator team, which I lead at our headquarters in Milwaukee. The purpose of this team is to leverage the business opportunities created in large part by the Recovery Act funding by helping to accelerate market demand and the pace of energy storage innovation as we simultaneously stand up the plant in Michigan. The Business Accelerator was chartered last fall and has recruited significant industry expertise including many technical and management experts from defunct Imara Corporation. Additionally our Battery Technology Center is undergoing major upgrades in both facilities and equipment including a 50% increase

in the size of our Battery Test Facility which was built just two years ago. Although our Recovery Act award cannot be used to fund R&D expansion; it is being done exclusively with Johnson Controls and Johnson Controls-Saft funds, clearly ARRA funds have become a force multiplier which will directly drive excellence in domestic manufacturing and indirectly provide the impetus and confidence for companies such as ours to invent the future rather than attempt to predict it.

The Challenge – Demand for Electric Vehicles

Congress has shown vision and determination in appropriating \$2 billion in Recovery Act funding to support the development of a U.S. manufacturing industry for advanced batteries and for electric drive components. Job creation and retention will result from our ability to “fill up our plant” with customer orders. At capacity, our first plant will employ 550 people. Historically, the creation of one job at the Tier 1 level such as Johnson Controls will have a multiplier effect of approximately 3 additional jobs in the lower tier supply base. Studies by both the Economic Policy Institute and the Council for Automotive Research support this jobs multiplier factor. In summary we expect that when running at capacity the total employee impact of our Holland, MI plant will approach 2,000 industry jobs. This doesn't include supporting business infrastructure jobs such as restaurants, barber shops, shops, etc. However, the sustained success of this investment will depend ultimately upon creating demand for electric drive vehicles. We run the risk of creating more capacity to build batteries and critical components for new electric drive vehicles than what the market will demand, particularly during the early stage of commercialization. Of concern is the near-term, i.e., 2010 through 2015 when market demand, if left uncatalyzed, will lag manufacturing capacity. The bar chart shown below underscores the challenge – we estimate that by 2015 domestic capacity in vehicle units will exceed demand by approximately 1.35 million units, a gap of 62 percent.

Electrified Vehicle Demand vs. Capacity - North America
(in thousands of units)



Early in the life cycle of any new product or technology, scale is one of the critical factors enabling manufacturing success, as well as cost reductions. Electrification of vehicle fleets, including government fleets, can be a major contributor towards rapidly achieving scale.

Combined, the U.S. General Services Administration, Postal Service, and Department of Defense operate approximately 1 million non-tactical vehicles. Many of these vehicles, particularly Postal Delivery LLV vans, are excellent candidates from an economic standpoint for some level of power train electrification. The average Postal Delivery vehicle travels 18 miles a day at very low speeds in stop-start mode and averages only 10 mpg. The Postal Service's Inspector General Office estimates that a full electric version of a delivery vehicle will save \$1,500 per year in fuel cost if gasoline is priced between 3-4 dollars per gallon. Many other federal fleet vehicles are also good candidates for electrification and would help create demand.

Beyond the federal government, the 50 states collectively operate another 1 million vehicles. Electrification of state and local government fleets would have a significant impact on creating demand. Johnson Controls Building Efficiency business operates a service vehicle fleet of 5,548 vehicles. Seventy-seven percent of these vehicle travel less than 60 miles daily and 25 percent travel less than 40 miles per day. This represents a tremendous opportunity for us to electrify our own vehicles and gain invaluable field experience and help to build demand. We have implemented a pilot program in Milwaukee and will be taking delivery of our first fully electric service van within the next month.

Leveraging the Recovery Act Manufacturing Investment

In order to stimulate demand through government agency purchases of electrified vehicles for their fleets, we will need to leverage our existing Recovery Act investments. This could be done by establishing a preference to purchase electric drive vehicles for government fleets that contain batteries and components manufactured in facilities supported by Recovery Act grants. The risk if we do not leverage our investment is that our tax dollars could go to purchase electrified vehicles assembled in the United States but with batteries and components made in foreign countries. This could have the unintended consequence of stunting the utilization of domestic capacity, ultimately resulting in shuttered facilities and lost jobs.

In his Joint Address to Congress on February 24, 2009, one week after signing the Recovery Act, President Obama said:

“New plug-in hybrids roll off our assembly lines, but they will run on batteries made in Korea. I do not accept a future where the jobs and industries of tomorrow take root beyond our borders – and I know you don’t either. It is time for America to lead again.”

In addition to fleets, another critical policy to help spur demand is the continuation of tax incentives for the purchase of electrified vehicles. These incentives are proven demand boosters that must be maintained. Failure to continue these important tax policies at this time would send exactly the wrong signal to the marketplace and individual customers.

Another approach to stimulating market demand is advocated in the Electrification Coalition's Roadmap – the creation of Electrification Ecosystems. Investing in a series of large-scale demonstration projects will encourage the adoption of electric vehicles and prove their market readiness. The establishment of Electrification Ecosystems has three important goals:

- 1) Prove that wide scale deployment of grid-enabled vehicles is not only possible, but desirable;
- 2) Take advantage of economies of scale; and
- 3) Support research to answer critical questions about usage and recycling patterns.

Research and Development – The Future

As we execute our plan to create an advanced battery manufacturing industry we must also keep a focus on the future. The nature of technology is that there is always something better on the horizon. For the United States to achieve global product and manufacturing leadership in this technology is just the first step; we must sustain it with continuing and robust Federal R&D funding. In the same manner that lithium-ion is now supplanting nickel metal-hydride as the technology of choice for electric drive vehicles, the next game-changing chemistry is already being pursued by our global competitors in partnership with their governments. Japan has set a national technology goal for a 7X improvement in specific energy coupled with a 94 percent cost reduction for electric drive vehicle batteries by 2030. Commercialization of these technologies will depend on not only fundamental chemistry and materials breakthroughs, but also substantial innovations in manufacturing processes and equipment.

Technology R&D on this scale is risky and costly, requiring more resources, both capital and intellectual, than what is available in the private sector alone. Continuing federal support through the DOE and its national laboratory network is critical to ensuring that the technology of the future is made here at home. The near collapse of U.S. financial markets over the last two years has made it painfully clear that our eroded manufacturing base must be rebuilt and returned to its time-tested position as the cornerstone of a healthy economy.

We need to develop next generation lithium-ion batteries by improving electro-chemistries, as well as the battery systems which support and extend cell life. We must discover and develop the successor electrochemistry to lithium-ion. There are several technologies under consideration as the next transformation in battery technology. Equally important is the rest of the battery system, which includes sensors and thermal management components. Federal R&D support must be maintained in these areas in order for our domestic industry to remain competitive. We need to foster a collaborative relationship with the national labs and private industry to enable technology ideas to go from the labs to commercial success in the market place.

Additional Consideration – Tax Treatment of Recovery Act Grants

Currently, recipients of ARRA grants for advanced battery and critical components manufacturing, as well as the recipients of Smart Grid technology grants, need clarification on the tax treatment of these funds. Nothing in the Recovery Act indicates that these grants are

taxable. Legislation gave a clear intent of a 50:50 cost-share grant structure. Should the IRS interpret these grants as being taxable income, we may find that at a 30 percent taxation rate, many millions of dollars from the grants merely will go back to the government and not be spent on actual manufacturing and jobs. We understand that the IRS may be able to interpret their current authority and the intent of the legislation to not tax the Recovery Act grants. If not, the IRS may need a statutory ability to grant an exclusion and not consider these grants as taxable income.

The Recovery Act was designed to help create jobs and innovation in the United States in a tough economy and a hard competitive environment. Every dollar of the grant should be spent on hiring workers, developing new technologies, and putting manufacturing infrastructure in place that will propel American companies forward and enable them to compete with foreign manufacturers. Facilities such as ours can be great successes for the Recovery Act. We hope that the intent of the legislation will be clarified and the entire sum of the grant will go towards our facilities.

In conclusion, let me thank the Committee for this opportunity to testify. We are making important investments needed to develop a domestic and sustainable manufacturing base for the commercialization of electric drive vehicles. These investments will result in good paying, sustainable jobs, not only at our facility, but also throughout the domestic supply chain that we are building. Going forward, these investments to develop a domestic battery manufacturing infrastructure will enhance our global competitive position in the development and production of electrified vehicles. However, our progress must be maintained by creating demand for these vehicles by electrifying our fleets, maintaining tax incentives, and investing in research and development. The success of these initiatives is critical to the security, economic vitality, and environmental stability of our country and planet.

Let me close by saying that Professor John Goodenough, an American, is widely credited with having invented Li-Ion energy storage technology in the 1980s. Congress has shown vision and wisdom in providing funding through the Recovery Act to ensure that the world class technology previously invented in America is now going to be manufactured here. Thank you

The CHAIRMAN. Thank you very much, and thank you for telling us something Jay Inslee doesn't know. That is a first in this committee.

Our next witness is Paul Gaynor, who is the CEO of First Wind, an independent company focused on the development, ownership, and operation of wind farms. Mr. Gaynor has over 20 years of experience in the energy industry and has been involved in the financing of these projects around the world.

We welcome you, sir.

STATEMENT OF PAUL GAYNOR

Mr. GAYNOR. Thank you, Chairman Markey, Ranking Member Sensenbrenner, and members of the committee. Thank you for inviting me to testify today.

My name is Paul Gaynor. I am the CEO of First Wind, a U.S.-owned, independent wind energy company based in Massachusetts. We are focused on the development, financing, construction, ownership, and operation of utility-scale wind farms in the United States. We have been in business since 2002, and today we operate about 500 megawatts of clean, renewable wind power through six operating projects in Maine, New York, Utah, and Hawaii. Currently, we are wrapping up construction on our seventh project, the Stetson II expansion in Maine. All in all, these facilities represent an investment of approximately \$1.2 billion.

First Wind currently employs over 200 professionals in nine States in this new industry. In the communities that we work, we also rely heavily on people in these communities with local knowledge in order to properly site, build, and operate wind farms. Our projects generate significant amounts of employment and economic activity, which I will cover in more detail shortly.

I have been asked to address the impact of the clean energy provisions of the Recovery Act on our company; and the answer, in short, is the Recovery Act has been profoundly important to our ability to continue to grow and to make investments in renewable energy facilities. This has also resulted in approximately 1,000 jobs in 2009, and we expect a similar number in 2010.

The convertible investment tax credit, or ITC, has had the most impact with the collapse of the credit markets in 2008. Sources of capital practically dried up overnight. As a relevant example, we lost a \$140 million firm commitment from Lehman Brothers for a project that was under construction in New York. Then Lehman filed for bankruptcy, and the commitment was lost. At that point, all sources of capital were frozen; and an analysis by the American Wind Energy Association shows that in 2009 wind power development might drop as much as 50 percent from the 2008 levels.

Fortunately, Congress and the Obama administration recognized the threat that this extraordinary economic turmoil presented to our industry and responded with urgency and effectiveness. Thanks in large part to the clean energy provisions of the Recovery Act, the U.S. wind industry broke all previous records by installing nearly 10,000 megawatts in 2009, as the chairman noted in his opening comments. The Recovery Act provided the help we needed when we needed it.

During 2009, First Wind completed construction of wind facilities in Maine, New York, and Utah and began construction on another project in Maine. In partnership with our general contractors, RMT in Wisconsin, Mortenson Construction in Minnesota, and Reed & Reed in Maine, we created over 1,000 jobs during the construction of these facilities. And without the convertible tax credit program, the construction job creation and long-lasting economic impacts would not have happened.

Using the Stetson projects and the ongoing expansion as an example, the combined facility represents a \$220 million investment, with over 130 local named businesses providing goods and services during the development and construction phases, about 550 construction jobs in both phases.

For another example, I draw your attention to the pamphlet that I have handed out which outlines the economic benefits of our 200 megawatt Milford wind project in Utah. In this project, over 60 local businesses participated, creating 250 jobs on site and supporting an additional 200 jobs in the region.

Additionally, because of the Recovery Act, we have been aggressive in forging ahead with our business plans in 2010 and beyond. We plan to construct a second phase in Utah plus additional projects in Maine, Vermont, New York, and Hawaii, representing an additional 300 megawatts of power capacity and an incremental \$650 million of new investment in this sector.

The success of the program has importantly sent a strong signal to the capital markets and mobilized significant incremental capital. In our case, the Recovery Act funding has spurred an additional \$695 million of our own equity and loans from banks. We expect a similar impact on our 2010 plans.

Wind power is a capital-intensive business; and, thus, the opportunity to use Recovery Act funding to leverage significant private investment has been extraordinarily effective and important.

Additionally, I want to let you know that last week Secretary Chu announced that one of our projects has received a conditional commitment from the DOE under the Innovative Loan Guarantee Program. The Kahuku project in Hawaii uses an innovative battery storage system to address some of the wind integration issues facing the local utility.

We encourage Congress to follow the leadership of Chairman Markey and others on this committee who are trying to foster a more stable and predictable investment and regulatory climate for renewable energy. In particular, we hope Congress will make it a priority to extend the convertible tax credits this year. Access to capital has improved, but it remains far short of pre-financial collapse conditions.

Thank you for the opportunity to take part in this hearing. I look forward to answering your questions.

[The statement of Mr. Gaynor follows:]

**Testimony of
Paul Gaynor, Chief Executive Officer, First Wind Holdings LLC.,
before
The Select Committee on Energy Independence and Global Warming
U.S. House of Representatives
on
The Clean Energy Recovery: Creating Jobs,
Building New Industries and Saving Money
March 10, 2010**

Chairman Markey, Ranking Member Sensenbrenner, and members of the Committee, thank you for inviting me to testify today on the effectiveness of the clean energy provisions of the American Recovery and Reinvestment Act (Recovery Act) of 2009.

My name is Paul Gaynor and I am the chief executive officer of First Wind.

First Wind is a U.S. owned, independent wind energy company based in Massachusetts that is focused on the development, financing, construction, ownership, and operation of utility-scale wind energy projects in the United States. Today we provide some 478 megawatts (MW) of clean, renewable wind power capacity to U.S. consumers through six operating projects in Hawaii, Utah, New York, and Maine. Another 25.5 MW will be added shortly when construction is completed on another project in Maine.

Today, we employ over 200 engineers, project managers, meteorologists, construction workers, project developers, financiers, accountants, land specialists, permitting specialists, and others across the country. These are new jobs for this new industry. We've grown significantly, as I was just employee number six when I took the CEO job nearly six years ago. We also rely very heavily on local experts – biologists, transmission experts, land specialists, lawyers, wetland scientists, and others – during the development,



engineering, and construction phases of our projects. Through these consultants, contractors, suppliers, and others we do business with, First Wind's projects support a significant amount of employment and economic activity, which I will cover in more detail shortly.

I have been asked to address the impact of the clean energy provisions of the Recovery Act. In short, the Recovery Act, and especially the Section 1603 convertible tax credits, has been profoundly important to our ability as a company to put steel in the ground, deliver renewable energy, and put people to work during 2009 and 2010. From discussions with other wind developers and the American Wind Energy Association (AWEA), many others in the wind industry feel similarly.

With the collapse of credit markets in 2008, sources of capital dried up practically overnight. First Wind had a firm binding commitment from Lehman Brothers to be the tax investor for our 125 MW Cohocton projects in New York State, which at the time was under construction. When the firm went bankrupt we lost our source of permanent capital and had a \$140 million hole in our funding plan. That was the beginning of the financial crisis for us – a direct hit on our business. From the fall of 2008 until spring of 2009, all sources of capital were frozen. Projections from AWEA and the financial sector suggested that the 2009 tax equity market – which, as the means to monetize Section 45 Production Tax Credits, has historically been an essential source of funding for wind development – would have only a fraction of the capacity necessary to finance the wind projects companies like ours were planning to build. It was anticipated that the supply of tax equity deals in 2009 would only equal about 4,000 MW of new construction. In



fact, AWEA was concerned that in 2009 wind power development might drop by as much as 50 percent from 2008 levels. Many projects simply were not going to get financed and therefore not going to get built. This means people were going to lose jobs and the nation was going to lose momentum toward the goal of increased energy independence.

Fortunately, Congress and the Obama administration recognized the threat that this extraordinary economic turmoil posed to our industry and responded with urgency and effectiveness. Thanks in large part to the clean energy provisions in the Recovery Act, the U.S. wind industry broke all previous records by installing nearly 10,000 MW during 2009, according to AWEA. The Recovery Act provided the help we needed, when we needed it.

In particular, in order to immediately gain the employment, economic, energy, and environmental benefits of building renewable power facilities, the Section 1603 convertible tax credit program was designed to provide a means of filling the gap in the tax equity market quickly and in a way that did not rely on the decimated financial sector. With the help of this program, First Wind has responded by getting projects financed and built, putting people to work, and generating clean, renewable wind power.

During 2009, First Wind completed construction of wind facilities in Maine, New York, and Utah, and began construction on another in Maine that will be finished this month. All of these facilities employ turbines manufactured by U.S. companies GE and Clipper Windpower. In partnership with our general contractors – RMT of Madison, Wisconsin, Mortenson Construction of Minneapolis, Minnesota, and Reed & Reed of Woolwich, Maine – we created



over 1000 jobs during construction of these facilities. In light of the credit market breakdown, without the convertible tax credit program available in 2009 we would have fallen short of installing the over 400 MW of new wind capacity that these projects represent.

First Wind was pleased to have been one of the first companies to benefit from the Section 1603 program, when we received over \$74 million in connection to two projects in Cohocton, New York, and more than \$40 million for our Stetson Wind project in Maine. These funds allow us to build other projects that could have otherwise been significantly delayed. There is no better evidence of this than the fact that the 1603 funds allowed us to invest in a 17 turbine expansion of the Stetson facility, which will be completed shortly. As I said at the groundbreaking, the project and the jobs it is creating would not be happening without the Recovery Act tax credits.

And what is the extent of the economic benefits? Using the Stetson project and the ongoing expansion as an example, the combined facility will represent a \$190 million investment, with over 130 Maine businesses providing goods and services during the development and construction phases, and approximately 350 construction jobs on the first phase and 200 jobs on the expansion. The center of the economic benefits is Washington County, Maine, where the projects are located, which received a tax payment of \$458,000 in 2009 in connection to the first phase of the project under the terms of a 20 year agreement.

Our 204 MW Utah project, which was completed last fall and for which a Section 1603 tax credit application is pending, has also provided extensive



economic benefits to a rural part of the country, as described in the attached pamphlet. Further, because of the Recovery Act, we've been aggressive in forging ahead with our business plan for 2010 and beyond, investing in project development, knowing that the Recovery Act will continue to play an important role in helping us fund these projects. Specifically, in 2010 we plan to construct a second phase of the Utah project, plus additional projects in New York, Hawaii, Vermont, and Maine, which would represent an addition of 294 MW of wind power capacity.

Numbers tell only part of the story, however, as the positive impact is expressed best by the words of the people working for our contractors that are in the field building these projects. A construction laborer named Ross who has worked on our Maine projects told us, "Wind energy has helped me by keeping me working when there are no other jobs to speak of." His coworker Ben said, "I feel my job is secure and my wages are fine, and I'm no longer broke. Thank God for windmills – they have changed my life for the better. I look forward to building hundreds more." A manager with an earthwork subcontractor described the benefits to his company: "Without wind power, we would be a significantly smaller company. Over the past four years, it's provided about 25 percent of our volume."

Part of the success of the Section 1603 program is due the speedy execution of reviewing, approving, and allocating the funding by the administration and federal agencies. The award announcement and funding came well in advance of the mandated 60 days, which sent strong signals to us that the administration is committed to renewable energy and the success of this program. Financial institutions have taken notice, too. Even in this dire credit



environment, we have successfully raised over \$1 billion in private investment since January 2009. Our ability to do so was greatly enhanced by the Recovery Act clean energy provisions. The development of wind power is extremely capital intensive, and thus the opportunity to use Recovery Act funding to leverage significant private investment has been extraordinarily effective and important.

The investment via the Recovery Act is sending a clear signal that the federal government is committed to growth within the U.S. renewable energy sector. We hope Congress will make it a priority to extend the convertible tax credits this year. Such action, along with a Renewable Electricity Standard (RES), would promote continued growth in wind and other renewables in this country.

I am grateful for the leadership of Chairman Markey and others on this select committee on the Recovery Act, renewable power issues generally, and of course, the Waxman-Markey bill. Many of us in the wind industry are in town this week encouraging the Senate to take up energy and climate legislation soon, with hopes that Congress can help foster a more stable and predictable investment and regulatory climate for renewable power prior to adjournment. Access to capital has improved, but it remains far short of pre-collapse conditions. On behalf of First Wind and others in the U.S. wind industry, we look forward to working with you to build on the success of the Recovery Act to develop long-term policies to promote renewable power development and manufacturing.



I greatly appreciate the opportunity to take part in this hearing, and I look forward to answering your questions. Thank you.

The CHAIRMAN. Thank you, sir.

Our next witness is Lisa Patt-McDaniel. She is the Director of the Ohio Department of Development, and she leads efforts to accelerate Ohio's economic growth through development of high-growth industries. She oversees Ohio's Recovery Act efficiency programs, including weatherization.

Welcome.

STATEMENT OF LISA PATT-McDANIEL

Ms. PATT-McDANIEL. Thank you, Chairman Markey. I want to thank you for the opportunity to speak with you today on behalf of Governor Strickland and myself.

The Ohio Department of Development is responsible for distributing \$512 million in stimulus funding through a variety of programs ranging from homeless assistance to renewable energy deployment. Ohio's nationally recognized home weatherization assistance program is administered by our Department's Community Development Division and specifically our Office of Community Services. We are providing assistance for citizens whose annual household income is at or below 200 percent of the Federal poverty guidelines.

The State's weatherization budget from the Federal stimulus is \$266 million. More than 32,000 housing units will be weatherized during the 3-year grant period and more families will get the help they sorely need and local businesses will see an increase in sales of materials, supplies, and trucks to carry out the larger program.

Ohio's process for utilizing weatherization resources effectively and expeditiously is one of the reasons I have the honor of speaking to you today. Ohio was recently recognized by the USDOE as leading the Nation in spending Recovery Act dollars to weatherize homes, with Ohio completing more than one in five of the projects reported nationally last year.

Since July, 2009, our State has weatherized over 8,100 homes. Dwellings weatherized to date represent 103 percent of our planned production so far, meaning that we have weatherized an additional 204 additional units than originally planned. And, importantly, the additional support for our weatherization program has required the creation of another thousand jobs and retained 1,500 jobs as of December of 2009.

We believe there are several reasons why our State was able to ramp up and respond to the needs of our citizens so quickly. Just to highlight, we have an excellent weatherization network. We have a large list of eligible households that we had before the Recovery Act was passed. We have an excellent Ohio weatherization training center. It is run by a corporation for Ohio, Appalachian Development; and we established three training hubs so we can train people to work in these jobs quickly. And, importantly, we instructed our providers to go ahead and start weatherizing homes with these funds as of July 1st, knowing that we would have to make up our staff salaries and retroactively adjust them once the prevailing wage rates were issued by the Department of Energy.

By reducing household energy expenditures, increasing energy efficiency, and increasing the safety of homes owned or occupied by

low-income Ohioans, we have a foundation to make our State a cleaner, more efficient place to live.

There are several important programs that complement our efforts to create jobs and promote energy efficiency, and these are through the State energy program, which received \$96 million of Recovery assistance. We designed programs through that set of money to stimulate the economy through the retention and creation of jobs, saving energy, increasing generation from renewable energy projects, and reducing greenhouse gas emissions.

I am going to briefly touch on the programs that we designed with that \$96 million, but the programs were meant to support our aggressive renewable energy portfolio. It is the third most aggressive portfolio in the Nation, and we wanted to make sure that we created jobs with a focus of the expenditure of these programs.

We set up a Deploying Renewable Energy in Ohio Initiative which is investing more than \$42 million of those funds through renewable deployment projects focusing on strengthening Ohio's manufacturing industry, transforming waste to value by capitalizing on what would otherwise be considered waste by-products from Ohio's agricultural and food production industries and turning it into a source of renewable energy.

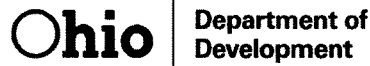
We took \$8 million and allocated it to making efficiency work through grants to help fund greater energy efficiency projects. Our targeting industry efficiency program provides for \$15 million in grants to manufacturing companies seeking to improve the sustainability of Ohio's industry. The banking on new energy financing, which we also call the Ohio Energy Gateway Fund, is a private-public partnership which will expand access to capital to grow and sustain the fuel cell, solar, wind, and energy storage industries in Ohio; and, finally, setting the stage for Ohio's Carbon Management Strategy Initiative, which is allocating \$500,000 to organize an integrated collaborative planning process to address energy policy.

The announcement of the targeted industry efficiency portion of the State energy program will create an estimated 217 jobs across the States.

In conclusion, I would just like to say that we are building on the foundation with the Recovery Act funds, and they have been very important to us in promoting Ohio's economy.

I thank the Chairman and the ranking member and the committee members for having me speak today.

[The statement of Ms. Patt-McDaniel follows:]



Ted Strickland, Governor Lisa Patt-McDaniel, Director
 Lee Fisher, Lt. Governor

**Testimony to the Select Committee on Energy
 Independence & Global Warming
 Lisa Patt-McDaniel, Director
 Ohio Department of Development
 March 10, 2010**

Chairman Ed Markey, Ranking Member James Sensenbrenner, Jr., and Committee Members, I am Lisa Patt-McDaniel, Director of the Ohio Department of Development. Thank you for the opportunity to speak with you today about Ohio's successful implementation of federal and state programs to create an energy efficient Ohio economy. After providing a brief overview of the beneficial work underway in Ohio, I would be happy to engage in a dialogue with you and address any questions you may have.

Before I speak directly to our efforts on energy, I'd like to explain what role the Ohio Department of Development plays in Ohio's economy. Our Department spearheads the state's efforts to promote economic growth statewide. On a daily basis, we respond to the needs of companies seeking to locate or expand in the state; process requests for loans and grants; administer stimulus initiatives, such as Home Weatherization Assistance Program (HWAP) and State Energy Program (SEP); manage the Ohio Third Frontier to advance the technology sector; promote workforce training efforts; and address the needs of dislocated workers.

These programs are part of a strategic framework focused on growing the income of Ohioans, creating and retaining jobs, and expanding productivity through innovation. One of the central tenants of our framework is to work with communities, people, and businesses to meet the considerable challenges facing our state and our nation. This downturn has challenged our Department – and all of you as elected officials – to renew our efforts to meet these challenges and focus on a better way to serve our citizens.

CHANGES IN ENERGY

Energy dependence, consumption, and production have become increasingly important to Ohio and the nation – especially in recent years. Energy consumption in the United States more than tripled from 1949 to 2008 – from 31.982 to 99.304 Quadrillion BTUs – and the need for renewable energy sources and to use energy efficiently has never been higher. In fact, Ohio alone accounts for more than \$45 billion on energy spending every year and places the state fifth among all states in overall energy consumption.

77 South High Street 614 | 466 2480
 P.O. Box 1001 800 | 848 1300
 Columbus, Ohio 43216-1001 U.S.A. www.development.ohio.gov

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OUR RESPONSE

The Ohio Department of Development is responsible for distributing more than \$512 million in stimulus funding through a variety of programs ranging from homeless assistance to renewable energy deployment. Those investments are in addition to numerous state programs and initiatives which are focused on nearly every aspect of energy production and consumption, including weatherizing homes for lower-income citizens, assisting businesses with investments to become more energy efficient, and supporting community projects to install technologies such as solar panels. The goal is to renew our efforts to meet the challenges facing our businesses, communities, and people. These ventures serve as economic elevators for Ohio businesses and households, and improve the quality and cost of living in Ohio communities.

Home Weatherization Assistance Program (HWAP)

Ohio's nationally recognized Home Weatherization Assistance Program (HWAP) is administered by our Department's Community Development Division and its Office of Community Services, providing free assistance for citizens whose annual household income is at or below 200 percent of the federal poverty guidelines.

The Department allocates funding based on an existing formula methodology, with funds directed to local community action agencies and other public and nonprofit entities that carry out the Home Weatherization Assistance Program across the state. Our Department utilizes a weatherization provider network, which consists of 58 separate entities. Since 1977, the state has successfully weatherized more than 304,000 dwellings throughout the state through the program, resulting in a reduction of millions of pounds of gases.

Our Office of Community Services is collaborating with the U.S. Department of Energy on the expanded Home Weatherization Assistance Program to benefit low-income Ohioans. The state's weatherization budget from the federal stimulus is more than \$266 million. More than 32,000 housing units will be weatherized during the three-year grant period. More families will get the help they sorely need and local businesses will see an increase in sales of materials, supplies, and trucks to carry out the larger program.

Ohio's process for utilizing weatherization resources effectively and expeditiously is one of the reasons I have the honor of joining you today. Ohio was recently recognized by the U.S. Department of Energy as leading the nation in spending American Recovery and Reinvestment Act funds to weatherize homes, with Ohio completing more than one in five of the projects reported nationally last year.

Since July 2009, our state has weatherized 8,145 homes, resulting in a return of \$1.67 for every dollar invested through the program. Dwellings weatherized to date represent 103 percent of our planned production; so far, Ohio has weatherized 204 additional units than originally planned.

We believe there are several reasons why our state was able to ramp up and respond to the needs of our citizens so quickly:

- An increase in weatherization funding in 2008 enabled agencies to purchase additional equipment prior to the passage of the American Recovery and Reinvestment Act.
- An existing, well-established network of weatherization providers was a critical component. The Office of Community Services allocated the Recovery Act Home Weatherization Assistance Program funds to the existing network on a formula basis to ensure that the entire state would receive program services.
- Many of the weatherization providers had lists of eligible households to be weatherized prior to receiving funding.
- The Ohio Weatherization Training Center, a well-established training facility operated by the Corporation for Ohio Appalachian Development, enabled new staff to be immediately trained. Also, the training curriculum was streamlined to quickly train and certify staff. Three training hubs were opened in addition to the main training center in Athens, Ohio to enable training without travel.
- The Office of Community Services noted early on that there were insufficient local inspectors available to review completed housing units. Working with the training center, plans were implemented to increase the number of inspectors hired and trained.
- The Office of Community Services provided a 10 percent advance of the individual grant amounts to weatherization providers, enabling agencies to purchase additional equipment such as vehicles and weatherization supplies.
- Finally, the Office of Community Services instructed providers to begin weatherizing houses on July 1, with weatherization staff salaries to be retroactively adjusted once prevailing wage rates were issued by the U.S. Department of Energy.

Every weatherization investment aides Ohio's ability to promote economic development while making the client's home safe, comfortable, and more affordable to operate. Plus, a more energy efficient home cuts costs for homeowners and frees those dollars for spending on other goods and services. The market value of homes weatherized increases, resulting in immediate and long-term benefits for homeowners and their neighbors. This, in turn, raises the integrity of neighborhoods, which indirectly impacts the longevity and type of businesses in the area – promoting local economic growth.

By reducing household energy expenditures, increasing energy efficiency, and improving the safety of homes owned or occupied by low-income Ohioans, we have a foundation to make our state a cleaner, more efficient place to live.

State Energy Program (SEP)

There are several important programs that complement our efforts to create jobs and promote energy efficiency through the Home Weatherization Assistance Program. The State Energy Program (SEP) is a \$96 million program designed to stimulate the economy through the retention and creation of jobs, saving energy, increasing generation from renewable energy, and reducing greenhouse gas emissions. The

program is a collaboration between the Ohio Department of Development and the Ohio Air Quality Development Authority, with input from additional state agencies. The State Energy Program is broken down into the five subprograms outlined below.

- The *Deploying Renewable Energy in Ohio* initiative invests more than \$42 million of State Energy Program funding through renewable deployment projects, focusing on strengthening Ohio's manufacturing industry; transforming waste to value by capitalizing on what would otherwise be considered waste byproducts from Ohio's agricultural and food production industries and turning it into a source of renewable energy; and furthering important efforts in advancing biofuels. The overall goal of this initiative is to further Ohio's important manufacturing and agriculture economic bases by deploying flagship projects that help drive demand for these important industries.
- The *Making Efficiency Work* portion allocates \$8 million to fund grants to help promote greater energy efficiency. Through this initiative, Ohio will build partnerships with the building and contractor industries, conduct pilots of above-code new commercial and residential construction, and incentivize the participation of entrepreneurial and minority-based enterprises. The initiative will reduce energy waste in existing buildings and new construction by using such techniques as equipment retrofits, and green building techniques and technologies.
- Our *Targeting Industry Efficiency* program provides for \$15 million in grants to manufacturing companies seeking to improve the sustainability of Ohio industry. This initiative will improve the sustainability of Ohio's manufacturing industry by reducing greenhouse gases and other criteria pollutant emissions in non-attainment areas, building expertise and awareness in industrial carbon management projects, and assessing the economics of carbon reduction activities in the industrial sector.
- The *Banking on New Energy Financing (Ohio Energy Gateway Fund)* is a public-private partnership that will expand access to capital to grow and sustain the fuel cell, solar, wind, and energy storage industries in Ohio. The fund includes a \$30 million commitment of funds from the State Energy Program and \$10 million from the Ohio Bipartisan Job Stimulus Plan, and requires a minimum of one-to-one match by the private finance markets. The goal of the Ohio Energy Gateway Fund is to drive job creation and growth in both the primary and supplier network of Ohio's advanced energy sector.
- Finally, the *Setting the Stage for Ohio's Carbon Management Strategy* initiative allocates \$500,000 to organize an integrated collaborative planning process to address energy policy related to energy diversity, sustainability, and innovative policies. This initiative will help secure a reliable energy future and is being led by the Governor's Energy Advisor. Specifically, this initiative will develop an energy strategy for the next five to 10 years that will assess the opportunities and risks for Ohio's economy around key energy issues including carbon policy and market options. It will cover the following activities: climate change planning, energy use and modeling, and policy and energy legislation.

On November 30, 2009, we announced our first set of awards, which will distribute more than \$13 million to wind and solar deployment projects and help Ohio become more energy independent through renewable resources. Last month, we announced a second set of awards, with more than \$11.8 million in industry efficiency grant awards funded through the State Energy Program. Over the next few months, the Department will be awarding the remaining funds, catalyzing new investment and job creation in the energy sector.

Energy Efficiency Conservation Block Grant

The final program I would like to highlight is the Energy Efficiency Conservation Block Grant. The State of Ohio's total allocation of \$84 million through the program is divided into two parts. A total of \$25 million is available as a direct allocation to the state, while the remaining \$59 million is a direct allocation from the U.S. Department of Energy to Ohio's 10 largest counties and 33 largest cities that were required to file an energy strategy proposal with the federal government in mid-August.

Regarding the State of Ohio's direct allocation, in October, our Ohio Energy Resources Division began accepting applications for \$15 million in funding available through Ohio's Energy Efficiency and Conservation Block Grant program for eligible non-entitlement county and city governments. Projects that are specifically part of the program involve those that will lower fossil fuel emissions, reduce energy usage, and create jobs. This program is designed specifically for local county and city governments that did not receive direct allocation from the federal government.

Project activities include energy efficiency retrofits and installation of distributed energy technologies in the residential, commercial, industrial, government, or academic sectors; higher efficient lighting for traffic signals and street lights; reduction and capture of methane or greenhouse gases; and installation of renewable energy technologies on government buildings. Awards will be selected through a competitive process in the coming months.

JOB CREATION

Each one of the programs that the Ohio Department of Development administers and utilizes is designed to promote economic growth and ultimately, create and retain jobs. With national and state unemployment hovering around 10-11 percent, jobs continue to be at the forefront of every citizen's mind and a focus of economic development leaders.

Utilizing grants, loans, and tax incentives, our Department works to invest in projects that create and retain jobs for our citizens over the near and long term. Not all programs work in the same way, with some creating jobs immediately in our communities and others creating jobs over an extended period of time.

For example, the announcement of the *Targeting Industry Efficiency* portion of the State Energy Program will create an estimated 217 jobs across the state. Kovatch Castings, Inc., a family-owned metal castings company in Summit County (Northeast Ohio), was awarded \$1 million to replace three inefficient ovens with two energy-efficient gas ovens at their foundry, which would reduce gas use by 47 percent and create 45 new jobs. Jobs will be created over the near term because the installation of the new ovens will

require the company to expand its plant, creating immediate construction jobs. In the long term, the addition will increase capacity at the facility, leading to an increase in production, an increase in sales, and eventually, the need for more workers to meet that growing demand.

The impact of these investments can also be much bigger, fostering the growth of an entire industry. Programs like those in the energy fields create both immediate jobs and set in motion a chain of events leading to industry-wide job growth for many years. The need for a workforce trained in energy efficient technologies and workers with specialized skills to install these technologies is growing, leading to thousands of jobs over the span of several years.

Weatherizing homes in local communities, for example, creates a demand for technicians and workers trained in installing specialized products, leading to an increase in jobs directly. We'll need workers to fill these positions as the industry grows, leading to an increase in educational programs at local colleges, universities, and technical centers. The increase in technicians then fuels a demand for research and development of more efficient, more effective technologies, leading to more jobs in research fields.

This kind of drive for innovation and creation of knowledgeable workers has consistently been cited by company executives as a major factor in their decisions to expand or relocate to a particular state. The investments we are making today – particularly in the energy fields – are the types of investments needed to create jobs not just for today's workers, but also future generations.

The additional support for Ohio's Home Weatherization Assistance Program, for example, has successfully created 1,000 jobs and retained nearly 1,500 direct jobs as of December 31, 2009 – representing the type of investment needed to create good-paying jobs for our citizens. But in addition to these jobs, businesses across Ohio are bringing back employees or creating new positions to keep up with the demand created by the influx of Recovery Act dollars. As a result of the increase in insulation equipment orders from around the country, Ohio-based Krendl had to expand its workforce by 30 percent. One of Krendl's distributors, Applied Energy Products, Inc., increased its staff by almost 60 percent and small local businesses, such as Wayne Heating Air Conditioning & Plumbing, are hiring additional help to keep up with the work the company does for a number of the community action programs in Ohio.

Our state is also using the Recovery Act funding to expand training through the Ohio Weatherization Training Center (OWTC), which is operated by the Corporation for Ohio Appalachian Development (COAD). The Center's mission is to train all field staff in state-of-the-art techniques to identify cost-effective energy efficiency measures that will safely reduce the energy burden in all types of building structures.

The Center opened four regional training hubs in addition to the main site in Athens, Ohio. During the summer of 2009, the Ohio Weatherization Training Center trained almost 600 students – compared to previous years when it took the entire year to reach that many students. The Center will continue to train as many students as possible to keep up with the need for skilled weatherization crews, auditors, and inspectors.

Altogether, these programs exemplify the type of investments needed to grow not only promote industry-wide growth, but also create and retain jobs. The goal is to make investments that not only help our citizens today, but also build a foundation for success for future generations.

CONCLUSION

The national and state economies demand both a rapid response and a strategic framework for future success. Our communities and our neighbors are looking to the Ohio Department of Development and the state to create opportunity more than ever – in many cases, with fewer resources. The Department has responded to these needs strategically, working on projects that capitalize on Ohio's strengths, focus on areas of future economic growth, and promote a better way of life for our citizens.

With the Ohio Department of Development's Strategic Plan as the foundation, we are working with our partners across the state and at the federal level to adapt to the changes in our economy with speed, ingenuity, and a long-term vision for economic growth. Not only have we tightened our belts to "live within our means," our Department is continually utilizing funding from the American Recovery and Reinvestment Act and state programs to "invest in what matters." We look forward to continuing to address these challenges with the support of the Congress to promote business growth, enhance our communities, and improve the quality of life for Ohio citizens at every economic level.

Chairman Ed Markey, Ranking Member James Sensenbrenner, Jr., and Committee Members, I appreciate this opportunity to speak to you about the Department of Development's efforts and I would be happy to answer any questions.

The CHAIRMAN. Thank you.

Our next witness is Brian Ashley. He is the chief Marketing Officer of the solar company Suniva and has most recently led Suniva's emergence into the Indian and European solar photovoltaic markets.

STATEMENT OF BRYAN ASHLEY

Mr. ASHLEY. Thank you very much. I am very proud and honored to be here before the committee today.

Suniva is a great American jobs and export success story. We manufacture some of the world's most efficient and highest power silicon solar cells and modules, and we use low-cost and manufacturing techniques to do so. Therefore, we can beat the Chinese at their own game.

In fact, this is what we make in Norcross, Georgia. It is about 4.3 watts when the sun shines on it; and, Mr. Chairman, I will be happy to give this to you. You can tape it on the module that you have in your office and modernize it a little bit.

Suniva was spun out of the Department of Energy funded University Center for Excellence in Photovoltaics at Georgia Tech University with a deep patent portfolio of American patents and technology and access to one of the best solar labs in the world for our research and development. It is a great example of governmental-funded research helping create U.S. industry leadership and 150 new jobs since 2007 when we were founded. Very good, well-paying jobs, I might add.

We currently have a hundred megawatts of capacity in our plant in Atlanta, and we do produce the highest efficiency at low cost solar cells in the world. We produce 18 percent efficiency cells today. Most of our competitors are at about 16.8 percent. And that efficiency, of course, represents the amount of sunlight actually converted to electricity.

We expanded in 2009. We added 80 new direct jobs, provided over 200 indirect jobs, and spent \$19 million on new equipment for our lines. We received 48C credits of \$5.7 million for that investment, and we thank you very much. This was very important to the expansion and being able to add these jobs sooner than we would have been able to.

Domestic demand has also been stimulated for solar thanks to the Treasury's 1603 provisions which gave us the additional confidence to move up the expansion dates earlier than planned, as well as for our plant, too, which I will mention in a minute. And the demand there is turning into real business here in the United States. We currently employ many former auto workers and managers from shuttered GM and Ford plants in the Atlanta metro area; and 24 percent of our workforce are veterans, mostly from the Iraq war.

We exported 90 percent of our 2009 production. We are beating the Chinese. I exported to India, China, South Africa, even to Taiwan.

The first grid-connected solar farm in India in the state of West Bengal is powered by Suniva cells manufactured by workers in Norcross, Georgia, instead of Shanghai.

Currently, the second largest solar farm in India in Karnataka state, which Prime Minister Singh will dedicate this month himself, is also powered by American technology made in Norcross, Georgia.

The roof of the new sports stadium in New Delhi, which will be home to the commonwealth games, has 1.1 megawatts of Suniva cells.

We have power fields in Germany, Italy, and France powered by Suniva; and the list is growing.

We plan to export at least 85 percent of our production this year, which is greatly expanded from last year—if we can expand quick enough.

Our problem is we are sold out. We have had to turn away new export customers since last December, unfortunately, including another Chinese company that wants to buy my products. We have had to impose limits on the allocations to our current customers.

I was in India three weeks ago on a U.S. Commerce Department Trade mission and had to turn business away. I am sad to say that Chinese and Taiwanese workers will benefit from that and get that business rather than more U.S. workers.

The Chinese and Taiwanese are very, very serious about owning the solar PV value chain which we in this country have neglected far too long; And they will own it like they own many other manufacturing industries if we don't continue to do what you started to do in the last year to help support us.

There are many high, very large, well-funded Asian businesses that are trying very hard to do what we do. Right now, we are the only ones who do what we do with our technology, but they will catch up with us. They will figure it out. And we have got to stay ahead of them. But we have also got to spend money on expanding and creating new jobs to meet that customer demand. It is a big tradeoff, and right now it is hard to borrow money still. It is damn hard to borrow money still, I am sorry to say.

We are currently building out a 30,000 square foot physical extension to our facility in Atlanta right now, adding a new 70-megawatt line. That is 50 new direct jobs we are hiring right now and 200 indirect jobs in construction. An extension of extra funding in 48(c) like the President has asked for will help us a lot, especially if it is refundable quickly so we can turn it into cash. We would immediately apply if that were to happen. Reasonable financing is very hard to get.

We are planning our second plant, a 400 megawatt initial capacity plant in Saginaw, Michigan, 500 direct jobs, 21,000 indirect jobs according to Michigan Economic Development. It will go to a gigawatt eventually. We are awaiting word right now from the DOE on a loan guarantee so we can break ground and start this. Again, if 48C were expanded and refundable, like 1603, we would put in an application ASAP for that equipment.

Other areas where you could help create more clean tech jobs are in RPS and certainly in national feed and tariff would be extremely helpful.

We are competing against the Chinese. We need U.S.-based solar industries as a matter of national security, I believe. I invite all of

you to come to Atlanta, see our facility and see the jobs. See the former auto workers and the veterans working there. It is real.

Thank you.

[The statement of Mr. Ashley follows:]

**TESTIMONY OF BRYAN ASHLEY
CHIEF MARKETING OFFICER
SUNIVA, INC.**

**HEARING ON
“THE CLEAN ENERGY RECOVERY: CREATING JOBS, BUILDING NEW
INDUSTRIES AND SAVING MONEY”**

**BEFORE THE
SELECT COMMITTEE ON ENERGY INDEPENDENCE AND GLOBAL
WARMING**

U.S. HOUSE OF REPRESENTATIVES

March 10, 2010

Thank you Chairman Markey, Ranking Member Sensenbrenner, and Members of the Committee. I am Bryan Ashley, Chief Marketing Officer for Suniva, Inc., a leading solar PV manufacturer that is renewing American solar energy leadership by manufacturing high-efficiency monocrystalline silicon solar cells and high-power solar modules using low-cost techniques. Our goal is to make solar-generated electricity cost-competitive with fossil fuels by developing products that are both highly efficient and affordable.

Suniva was founded in 2007 by Dr. Ajeet Rohatji, who, in 1992, also founded the University Center for Excellence in Photovoltaics (UCEP) at the Georgia Institute of Technology in Atlanta, Georgia. UCEP, one of the most respected solar research institutes in the world and funded by the U.S. Department of Energy, was established to improve the fundamental understanding of advanced PV products, and to give the United States a competitive advantage by providing guidelines to the industry and the Department of Energy for achieving cost-effective and high-efficiency photovoltaic devices.

As a spin off of UCEP, Suniva was well positioned for success by having a deep patent portfolio and access to one of the best labs in the world for our research. We are an outstanding example of how public/private partnerships can create world-class technology and American jobs.

Suniva and our leadership team have been widely recognized for our technological achievements and job creation.

Dr. Rohatji has received the *Excellence in Renewable Energy Award for Leadership in Renewable Energy* and was also honored by the Environmental Protection Agency with a *Climate Protection Award*. He was also selected by the Aspen Institute's 2009 Energy and Environment Awards as one of five finalists in the *Individual Thought Leadership* category, and received the *IEE Cherry Award*, the *Distinguished Professor Award* from the Georgia Institute of Technology, and the *Rappaport Award* from the National Renewable Energy Laboratory.

Suniva was recognized by the Technology Association of Georgia as one of the *Top 10 Innovative Georgia Technology Companies* and of the *Top 10 Companies most Likely to Create Jobs*. We also received the American Solar Energy Society's *Hoyt Clark Hottel Award*, the *AlwaysOn GoingGreen East 50 Award*, and was recognized by Tech Journal South as a *2009 Tech 50 Company*.

Just last week, Suniva was selected by the Wall Street Journal as number two on *The Next Big Thing: The Top 10 Clean Technology Companies*.

With more than thirty years of experience in PV research, Dr. Rohatji, who serves as Chief Technology Officer at Suniva, is recognized as one of the world's leading solar scientists, holding 15 world records for cell efficiency and numerous honors and recognitions.

We believe that our company motto - "American Innovation, American Quality, American Jobs" - speaks volumes about who we are as a company:

Growing from just 2 employees in 2007, we have to date created 150 direct jobs, and many more indirect jobs. In 2009, we expanded our facility, which has 100MW of capacity, by opening a second manufacturing line and creating 60 new jobs and spending \$19 million on new equipment, for which we received \$5.7 million in tax credits under the Recovery Act's 48C tax credit. Support from the federal government, in the form of the 48C tax credit, enabled us to add those jobs much sooner than we otherwise would be able to do.

We plan to open a third production line in Georgia in Spring 2010, and also recently announced a new manufacturing facility in Saginaw County, Michigan, which has extremely high rates of unemployment, that will eventually employ 500 people. The State of Michigan Economic Development Corporation estimates that, when you include the indirect jobs associated with this new facility, the total number of new jobs created in Saginaw County will reach 2,100. I should note that this new facility in Michigan is contingent upon Suniva receiving a DOE loan guarantee for which we have already applied.

We are particularly proud of the demographics of our workforce, with 24% being military veterans and others coming to us from the automotive industry as highly skilled employees who had lost their jobs when the local GM and Ford plants closed.

With this expanding and highly skilled workforce, Suniva is producing world-class technology, including record-setting 20%+ efficiencies for low-cost silicon cells in the lab, and the world's highest commercially available cell efficiency in full-scale production, currently at 18.2%+. Suniva is the only high-efficiency silicon exporter in America, with exports of more than 90% of 2009 production to Asia, Europe and South Africa. Nation's importing our product include China, India, France, Germany, Spain and Taiwan.

The first grid-connected solar farm in India, in the state of West Bengal, is powered by Suniva cells manufactured in Norcross, Georgia. The second, and currently largest, grid-connected solar farm in India, in the state of Karnataka, is also powered by American-made cells from Suniva and will be dedicated by Prime Minister Singh later this month. The roof of the new sports stadium in New Delhi, India, soon to be dedicated for the Commonwealth Games, supports more than 1.1MW of Suniva's American-made solar PV cells. The list of international solar fields powered by American-made Suniva cells is growing and includes fields in Italy, Germany, France and South Africa. To support this ongoing work, we plan to export 80% of our 2010 production, but in order to do so will need to increase our expansion.

While others may struggle in the worldwide marketplace, Suniva is already sold out through mid-2011 and has had to turn away new export customers, including a Chinese company,

and has had to impose limits on the allocations to our current customers. On a recent solar trade mission to India, sponsored by the U.S. Department of Commerce, I had to turn away business and am sad to say that Chinese and Taiwanese workers will benefit from that new business their companies will gain. As you are no doubt aware, the Chinese and Taiwanese are extremely serious about being the leaders of the solar PV value chain and market, and not just the “screwdriver” technology part of the value chain. They have designs on the upstream “high value add, high science” part of the chain -- which is where Suniva is finding such great success. While we are currently the only company that can do what we do, not only in the United States, but in the world, there are many very large and well-funded Asian businesses who are working very hard to achieve our level of proficiency. They will get there one day, but Suniva intends to stay ahead with investment in our research and bringing our product from “lab to line” in record time. In fact, we have a new generation product line reaching 19% efficiency that will become available this year. To continue our role as a solar leader, we will need to spend money on technology and research, and also on expansion in a very tough credit market environment. Recovery Act programs have played a key role in our success, and we are hopeful that the Congress will extend or expand on these programs.

All of this brings me to Suniva’s plans for the future and how the federal government can help companies like ours.

Suniva will expand with an additional 70MW line the second quarter of this year and is already building out a 30,000 square foot physical extension of our facility today. An extension or additional funding for 48C would be a tremendous help. With reasonable financing remaining difficult to find, we would very quickly reapply for 48C, especially if it were refundable.

As I indicated earlier, we plan to open our second manufacturing facility, in Michigan, in 2011. Eventually this new plant could grow to 1GW. While we are awaiting a final decision on our DOE loan guarantee application for this project to become reality, if the 48C tax credit were expanded we would certainly submit an application.

Other areas where the Congress could be helpful to the clean tech sector, would be in the creation of a national Renewable Energy Standard or Renewable Portfolio Standard, and a national feed-in tariff.

Suniva has industry leading technology that is developed and manufactured in the United States by American workers. This technology is beating foreign competition and being exported around the world, creating well-paying clean tech jobs at home and reviving America's leadership role in solar PV. The Recovery Act has directly helped us expand our manufacturing facilities with the 48C tax credit, and indirectly through the Treasury Department's 1603 Program for Payments for Specified Energy Properties in Lieu of Tax Credits, which has helped to grow our customer base.

Increased awareness of the benefits of renewable energy sources like solar, and federal support from the Recovery Act, have helped to stimulate a strong domestic demand for our products, while enabling us to have a vigorous export business to countries around the globe, who are now relying on American-made products to meet their energy needs. I urge the Congress to and the Committee to continue and expand on these efforts, which are demonstrative of a strong commitment to American leadership in clean technology.

Finally, I would invite the members of the Committee to come down to Georgia where you will see a world-class facility and American workers earning a good wage in new clean-tech jobs.

The CHAIRMAN. Our final witness today is Mr. Brian M. Johnson. He is the Federal Affairs Manager for Americans for Tax Reform and is the Executive Director of the Alliance for Worker Freedom. Welcome, sir. Whenever you are ready, please begin.

STATEMENT OF BRIAN M. JOHNSON

Mr. JOHNSON. Good morning, Chairman Markey, Ranking Member Sensenbrenner. I appreciate the opportunity to appear before you today to discuss the effects of the Recovery Act on our economy with respect to green job creation.

Government spending of this magnitude cannot stimulate our economy. Every dollar spent attempting to force the market toward a specific sector is subject to taxation and must be first borrowed out of our economy. The result is a redistribution of existing purchasing power, rather than the creation of new purchasing power. This spending creates less economic activity than if the money had been left with private-sector investors.

The goal was to create 3.6 million jobs, according to the administration's own estimates. Since signed into law, we have lost 3.3 million jobs. According to Recovery.gov, there were 440 non-existing congressional districts that saved or created false jobs to the tune of \$225,000 per job. Any potential impact the recovery package brought to the economy was virtually negated by the application of a 1931 market-distorting wage law known as the Davis-Bacon Act. Investigators from the Office of Inspector General found that, quote, one or more errors existed in 100 percent of the wage reports they reviewed.

The Davis-Bacon Act inflates wages on average by 22 percent nationwide and construction costs by almost 10 percent. Application of this wage law added \$17 billion to the Recovery Act and is impeding efficient implementation of the weatherization program nationwide. Mismanagement of the Recovery Act not only encompasses wasting money in the United States, but much of the money spent actually creates jobs overseas. Eighty percent of the first \$1 billion spent on grants to wind energy companies went to foreign firms. In the second round of government grants, 79 percent of the \$2.1 billion went to wind energy companies based overseas.

The renewable energy policy project estimates that for 1 megawatt of wind energy that is developed, 4.3 jobs are created. The 1,219 turbines built by foreign-owned manufacturers have potential capacity of 2,280 megawatts. Using their estimate, the installation of these turbines may have created as many as 6,838 manufacturing jobs overseas.

Domestically, the market-altering subsidization has the same economic effects. The Mohave Desert solar power project received \$1.4 billion from the Recovery Act. Construction of that facility required a thousand workers but only 86 permanent employees to run the plant. That is \$16 million in taxpayer subsidies per permanent job.

In Florida, the DeSoto solar center was to be the, quote, largest solar power plant in the U.S., according to President Obama. The center received \$150 million from the Recovery Act. After using 400 construction workers to build the site, the solar center now only employs two people.

The single largest wind grant under the program reported by the Department of Energy on December 29th was \$178 million for the Texas gulf wind farm in Sarita, Texas. All 118 turbines erected on the farm were built by Mitsubishi, a Japanese firm that does not build wind components in the United States.

Perhaps the most evident use of mismanagement and inherent inefficiencies lie in the failed weatherization program. While some States have experienced success, national results have been dismal. The Recovery Act provided \$5 billion to weatherize 593,000 homes. ABC News reports that less than 10,000 homes have been weatherized nationwide, while the Department of Energy claims 22,000 homes have been impacted, which is still less than 4 percent of the targeted goal.

So far, the Inspector General found the jobs impact has, quote, not materialized and the application of the costly Davis-Bacon requirement costs \$57,000 per home weatherized nationwide on a national average.

A State-by-State look exposes the localized impact of this flawed national program. New York has \$394 million available to weatherize 45,400 units but only did 280. Alaska, Rhode Island, Wyoming, and Washington, D.C., were given over \$50 million combined to weatherize homes. To date, zero homes have been impacted.

The biggest expenditure in the stimulus weatherization program is \$270 million. Not one penny of that went to actual home weatherization but was given to the Department of Energy to administer grants.

The Recovery Act was supposed to be timely, effective, and show immediate results. The realization is that using the invisible hand of the government to artificially tilt the economy will never be sustainable. Responsible solutions should remove barriers for private investment and should incorporate an all-of-the-above energy approach using a diverse blend of sources without raising taxes or increasing the regulatory burden.

Thank you again for the opportunity to speak today, and I look forward to answering any questions.

[The statement of Mr. Johnson follows:]

TESTIMONY OF
 Brian M Johnson MPA
 Federal Affairs Manager, Americans for Tax Reform
 Executive Director, Alliance for Worker Freedom

BEFORE THE
 Select Committee on Energy Independence & Global Warming
 Committee on Energy and Commerce
 United States House of Representatives

HEARING ON
 The Clean Energy Recovery: Creating Jobs, Building New Industries and Saving Money

March 9, 2010

Good morning Chairman Markey, Ranking Member Sensenbrenner and Members of the Select Committee. I am Brian Johnson and I serve as Federal Affairs Manager handling energy and environmental tax and regulatory policy at Americans for Tax Reform. I appreciate the opportunity to appear before the Select Committee to discuss the effects of the Recovery Act on our economy with respect to non-traditional green job creation.

The Recovery Act and the growth of the renewable energy sector and green jobs are mutually exclusive. The \$787 billion stimulus package signed into law on February 17, 2009, ended up costing \$862 billion as reported by the Congressional Budget Office in January. It is important to understand that government spending of this magnitude cannot stimulate our economy. Every dollar the government spends attempting to force the market toward a specific sector is subject to taxation and must first be borrowed out of the economy. The result is a redistribution of existing purchasing power rather than the creation of new purchasing power. This spending unintentionally creates less economic activity than if the money had been left with capable private sector investors. Rather than using the hand of the government to tilt the playing field by forcing public investment in alternative energy projects, the removal of barriers to private investment would allow for more profitable and sustainable natural investment into these fields.

By pushing for government subsidies, which differ from targeted tax cuts, the environmental movement and so-called "green stimulus" is by definition anti-economic growth. Many environmental organizations and individuals admit that reducing economic growth in the United States leads to lower emissions. President Obama's choice for chief science advisor even admitted a "massive campaign must be launched to restore a high-quality environment in North America and to de-develop the United States." This is not to suggest that the individuals here today support such notions, however it is important to note that the concept of a "green stimulus" is a contradiction in terms.

The goal of the stimulus package was to create 3.6 million jobs according to the Administration's own estimates. Since signed into law, we have lost 3.3 million jobs. The federal civilian workforce did manage to add 67,000 jobs, costing taxpayers \$271 billion. Not only were jobs not created in real districts, according to Recovery.gov there were 440 non-existing Congressional districts that saved or created jobs to the tune of \$225,000 per job.

With numbers like this it is no wonder only 6 percent of Americans think the stimulus package actually saved or created real jobs.

Additionally, any potential impact the recovery package brought to the economy was virtually negated by the mandated application of a market distorting law known as the Davis-Bacon Act. This Depression-era wage subsidy was enacted in 1931, when the federal government was the largest construction contractor, to prevent the government's own purchasing power from driving down wages. This is no longer the case and it now serves as an artificial inflator for union wages.

This wage determination is not a statistically random sample like the Bureau of Labor Statistics' unemployment or wage surveys and as such is extremely flawed and produces market distorting wage effects. Investigators from the Office of the Inspector General found that "one or more errors existed in 100 percent of the wage reports they reviewed." The Davis-Bacon Act artificially inflates wages, on average, by 22 percent nationwide and construction costs by almost 10 percent. Application of this wage law added \$17 billion to the Recovery Act in unnecessary inflated project costs and is impeding efficient implementation of the weatherization program.

A diverse national energy portfolio is crucial to economic health and stability. Such diversity, if economically sound, will occur naturally in the market without federal subsidies. Efforts by the government to pick winners and losers in the energy market almost always end up distorting the market. Green jobs will not reduce unemployment if they require significant government assistance. For example, wind and solar generated electricity currently enjoys subsidies almost 50 times higher per unit of energy output than traditional coal, and 100 times higher than natural gas. These subsidies take resources and jobs from other sectors of the economy.

The Institute for Energy Research has released a study about the "Green Jobs" program in Germany, and found that not only are these jobs costly, they are also unsustainable. Government subsidies for the solar industry have had a net cost since the year 2000 of \$73 billion and wind subsidies have cost \$28 billion. When compared to the US economy, which is five times the size of Germany's, we can see that it would cost us approximately half a trillion dollars. The government must pay an estimated \$240,000 for every solar employee. As soon as the government decides to cancel the dedicated stream of funding from which these jobs are derived, the jobs themselves vanish. In Spain, government subsidies for the wind and solar industry prevent 2.2 such jobs from being created in the private sector.

The scope of mismanagement of the Recovery Act not only encompasses wasted money in the United States, but much of the taxpayer money spent commanding the market toward green industries actually creates jobs overseas. 80 percent of the first \$1 billion spent on grants to wind energy companies went to foreign firms and jobs to build turbines overseas. In the second round of government grants, 79 percent of the \$2.1 billion in grants went to companies based overseas; of this money, \$2.9 billion go to wind facilities.

Energy Secretary Steven Chu said the point of this grant program was, "ensuring America leads the world in creating jobs in manufacturing the parts that go into wind farms." The Renewable Energy Policy Project, estimates that for every 1 megawatt of wind energy that is

developed, 4.3 jobs are created: 0.6 in operation and maintenance of the wind farms; .7 for the installation of new turbines; and 3 in manufacturing. The 1,219 turbines built by foreign-owned manufacturers have a potential capacity of 2,280 megawatts. Using the Renewable Energy Policy Project's estimate, the installation of these turbines may have created as many as 6,838 manufacturing jobs overseas.

Domestically, the market altering subsidization has the same negative economic effects. The Mojave Desert solar power project received \$1.4 billion from Recovery Act. Construction of that facility required 1,000 workers, but only 86 permanent employees to run the plant. That's \$16 million in government taxpayer subsidies per permanent job.

In Florida, the DeSoto Solar Center was supposed to be the "largest solar power plant in the United States," according to President Obama. The Center received \$150 million from the Recovery Act. After using 400 construction workers to build the site, the Solar Center now employs only two people.

The single largest wind grant under the program, reported by the Energy Department on Dec. 29, was \$178 million for the Texas Gulf Wind farm in Sarita, Texas. All 118 turbines erected on the farm were built by Mitsubishi – a Japanese firm that does not build wind components in the United States. Eurus Energy America, the U.S. subsidiary of a Japanese firm, received \$91 million in stimulus money for its Bull Creek wind farm in Texas. The farm consists of 180 Mitsubishi turbines – all constructed overseas.

Perhaps the most evident use of mismanagement of Recovery funds and inherent inefficiencies lie in the failed weatherization program. While some states have experienced success with this program, national results have been dismal.

The Recovery Act provided \$5 billion to weatherize homes in the hopes of making them more energy efficient by upgrading insulation, and most commonly adding insulated window treatments for 593,000 low income residents. ABC News reports that less than 10,000 homes have been weatherized nation-wide. Conversely, the Department of Energy claims 22,000 homes have been impacted – still less than 4 percent of the targeted goal.

Only \$522 million - less than 10 percent of the money available - has been spent on weatherization. The Inspector General found the jobs impact "has not materialized" and the Government Accountability Office found the application of costly Davis-Bacon wage requirements equates to over \$57,000 per home nationwide.

A state by state look exposes the localized impact of this flawed national program. New York has \$394 million available and planned to weatherize 45,400 units – but only did 280. Alaska was given \$18 million, Wyoming \$10 million, Rhode Island \$20 million and Washington, D.C. \$8 million to weatherize homes – to date, not one home in the 4 regions with over \$50 million spent have been weatherized.

The single biggest expenditure in the stimulus weatherization program is \$270 million. Not one penny of that went to actual home weatherization but was given to the Department of Energy to administer the grants.

The Recovery Act was supposed to be timely, effective and show immediate results. The realization is, using the invisible hand of the government to artificially tilt the economy towards non-traditional energy production and “green jobs” will never be sustainable. In doing so the government picks winners and losers in the market. Using targeted command-and-control legislation such as The Recovery Act, the losers are rewarded with government assistance.

Responsible public policy solutions should remove barriers to private investment and should support an “all of the above” energy approach, that incorporates a diverse blend of energy sources without raising taxes and/or increasing the regulatory burden.

Thank you again for the opportunity to speak to you today and I look forward to answering any questions.

The CHAIRMAN. Thank you, sir. You spoke so fast you left yourself 30 seconds over.

The Chair recognizes the gentleman from Missouri, Mr. Cleaver.
Mr. CLEAVER. Thank you, Mr. Chairman.

I thank all of you for your testimony.

I am a little concerned. We just had economic output rise at the slowest level this past decade since any decade since 1930, which means we have a serious challenge. And I am curious, Mr. Johnson, if you are criticizing government subsidies in the development of energy technology—and then make sure that you are—is that correct?

Mr. JOHNSON. Yes.

Mr. CLEAVER. Do you ever find it necessary to criticize government subsidy of the oil industry?

Mr. JOHNSON. The term “subsidy” has been thrown around a lot. One of the things a lot of industries benefit from are tax cuts. For example, section 199 is the domestic manufacturer’s tax deduction that all companies who manufacture domestically in the United States get.

Mr. CLEAVER. We only have 5 minutes. Are you equally upset that we have subsidized the oil industry approximately \$150 billion at least from 1968 to the year 2000, 150 billion, we don’t have decades of subsidization so that I am sure, does that bother you?

Mr. JOHNSON. Yes. I think targeted spending toward any industry is flawed.

Mr. CLEAVER. So let me suggest what should we do when we have an economic downturn, should we say we are not helping create any new jobs, we are going to sit around and remain happy and allow the rest of the world to overtake us? What would you have done had you been sitting in the room with the people I named earlier?

Mr. JOHNSON. Sure. You can create jobs without targeted spending. One of the ways which I mentioned was tax cuts. You can freeze spending and rescind unspent stimulus funds. You can reform regulations to reduce unnecessary business costs. And if you are intent on spending, you can make sure it is done efficiently and effectively by suspending all Davis-Bacon Act requirements.

Mr. CLEAVER. Are you aware that 30 percent of ARRA were tax cuts?

Mr. JOHNSON. Thirty percent, yes.

Mr. CLEAVER. You were aware of that?

Mr. JOHNSON. Yes.

Mr. CLEAVER. So you don’t support that?

Mr. JOHNSON. I support the tax cut component. The majority of the plan was spending, \$836 billion.

Mr. CLEAVER. So we should have done a stimulus package that wasn’t, in fact, a tax cut package?

Mr. JOHNSON. Think we should have done the tax cuts without the targeted spending.

Mr. CLEAVER. So we should have had a stimulus package without a tax cut?

Mr. JOHNSON. I am not supportive of a stimulus package at all.

Mr. CLEAVER. Including the tax cuts?

Mr. JOHNSON. The tax cuts as part of the package—the tax cuts I support. Tax cuts in general I support. The stimulus in terms of targeted massive government spending programs—

Mr. CLEAVER. But the tax cuts were supposed to stimulate the economy.

Mr. JOHNSON. The tax cuts are not spending. The part of—most of the stimulus package was direct spending which came into the market in favor of targeted certain industries.

Mr. CLEAVER. So you don't support tax cuts?

Mr. JOHNSON. I support tax cuts. I oppose targeted spending. They are two separate components.

Mr. CLEAVER. I understand clearly what they are. But I am saying you said you support tax cuts, but you don't support any stimulus. I am telling you the tax cuts were a part of the stimulus and you are saying, so I just want to know what you support.

Mr. JOHNSON. I support tax cuts and not massive government spending.

Mr. CLEAVER. So after we put the tax cuts in, that should have been the bill we approved?

Mr. JOHNSON. The bill should have been a broad based massive tax cut bill with no government spending.

Mr. CLEAVER. Okay. And so what about the fact that the rest of the world is taking off in terms of their technology in energy and what about the people who lost jobs, 8.4 million, 8.4 million just since the recession started?

Mr. JOHNSON. We are continuing to lose jobs. The stimulus package has not done anything near to what the economists predicted and what the administration said. The international experience hasn't been always positive. Spain, Germany, and Denmark have experienced extreme job losses in direct relation to targeted government subsidies with respect toward the Green JOBS Act. Only one in 10 of the jobs created through green investment is permanent in Spain. Germany is experiencing the same thing.

Mr. CLEAVER. Now you do recognize that Spain is a whole 'nother industry that relates to deficits and debt and the Euro. Let's talk about another country. Let's not do Spain. Spain is having some problems like Greece, but I just want to deal with, I am trying to get, if you had been sitting in this seat, what you said let's just forget everybody, forget everything, let's just have some more tax cuts, that by the way were passed without any kind of means of making up for the tax loss. Would that have been your policy?

Mr. JOHNSON. If I was sitting in that chair right now there were several things I would have done. Passing a massive spending bill is not one of them. Repealing the Davis-Bacon Act, enacting other reforms, making government more transparent, extending drilling areas. There are ways to reduce our energy independence and extend security.

Mr. CLEAVER. Okay, my last statement because my time is running out. Economists say that had wages kept up with the rising cost of living, that minimum wage today would be \$20.65 an hour. So I am coming out of public housing, I am concerned about everyday human beings who are losing their jobs and suffering and now have the opportunity to get a job doing weatherization. And they are doing it in my district, so it is not like a phantom job.

Thank you, Mr. Chairman.

The CHAIRMAN. The gentleman's time has expired. The Chair recognizes the gentlelady from West Virginia, Mrs. Capito.

Mrs. CAPITO. Thank you, Mr. Chairman. I thank the witnesses here today. Just for bit of a background, I represent the State of West Virginia, which we know is a very energy rich State in natural resources. Since the stimulus bill was passed our unemployment has gone from, in January of 2009, 6.7 to up over 10.5 percent and it is steadily climbing, a source of great concern for us in our State.

I am interested on a couple of issues. First of all, the statement by Mr. Johnson that and, Mr. Gaynor, you may be able to help with this, that 80 percent of the dollars that went for wind production were for foreign companies that are manufacturing overseas. I noticed in your statement you said you buy your components from domestic manufacturing. Can you help me with that?

Mr. GAYNOR. We have historically, since we have been building our business we have historically bought turbines from General Electric and Clipper Wind Power, which are both domestic suppliers.

Mrs. CAPITO. But the statement about, would you say generally speaking that most of the wind production jobs are in terms of making the actual turbines and stuff overseas, is that correct?

Mr. GAYNOR. AWEA has actually released some data that shows for all of the 1603 dollars, those projects I think were a total of 53 percent of the components, were actually sourced domestically.

Mrs. CAPITO. So that 47 percent went overseas.

The CHAIRMAN. Thirty-seven.

Mr. GAYNOR. The trend of where it was back in 2005 I think the number was 25 percent, and just anecdotally new wind power companies, Clipper is a good example, it is home grown here in the U.S., they have added manufacturing facility. Vestas, which is a large Danish manufacturer, has also made a very large manufacturing commitment in Colorado. So although the number, I think 53 percent is—it is true that means 47 percent is coming from overseas—I think the trend is certainly favorable.

My view is one of the things that is making that happen is the Recovery Act.

Mrs. CAPITO. I think that certainly in my State we are being told that we need to wean ourselves from fossil energy fuel production, and I wanted to ask from Mr. Ashley to in Norcross, Georgia, what is the energy, how do you generate your power in your manufacturing facility? How is it generated?

Mr. ASHLEY. We buy our power from a local utility.

Mrs. CAPITO. And how do they generate their power? Is it natural gas, coal, nuclear?

Mr. ASHLEY. I believe it is a combination of coal, gas and nuclear. It is Georgia Power, which is owned by the Southern Company.

Mrs. CAPITO. Disturbing in your testimony in my viewpoint is that you have opportunity for business expansion that you said you just saw 3 weeks ago in India, and you were unable to take advantage of that. If we are being told that we need to replace our fossil fuel jobs with green jobs and you can't expand your business and we are buying components from all around the world and not in

the United States, how can we reasonably think that the replacement of coal miners and others is going to take place here in this country when obviously we are not competing well internationally. This is the question I have, that if we are going to have the green jobs in our country and our States that are going to be penalized under a cap-and-trade proposal, how are we going to attract these jobs into our States.

Mr. ASHLEY. Well, I can't comment. I don't propose taking jobs away from coal miners at all. We need renewable energy because we need a combination of all energy sources to meet the world's needs, and that is here in the United States.

Mrs. CAPITO. I couldn't agree more.

Mr. ASHLEY. A 3-megawatt project that we are doing in India right now is bringing irrigation to people for the first time ever because of the locational flexibility of solar. It is not just about the U.S.

The U.S. could do a heck of a lot more, especially in Georgia, but a lot of people have fought it so long. Look, we need power especially, peak shaving power, Congresslady. It is not taking jobs away from somebody. It is not a zero sum game, I don't believe.

Mr. GAYNOR. I would certainly add to that and echo the same sentiment. Where we are building wind farms we are not taking away jobs from people that operate nuclear plants or natural gas plants, hydro plants, solar plants. These are new jobs that are being created.

And also from a wind perspective, wind is not the only solution, renewables are not the only solution. Nuclear, coal, clean coal especially, is all part of the solution. So I don't see them as replacing. It is not a zero sum game. It is additive. That has been our experience.

Mrs. CAPITO. I agree. I do think this is where I think we are in agreement here. I would like to say even though I did not vote for the stimulus package, I in my district do have a very expansive clean coal carbon sequestration experimentation going on right now at the A P plant, the Mountaineer plant on the Ohio River, right across the river from you. So I am very hopeful this will result in the technology and in the investment that will give us that all-of-the-above energy plan so that we can expand our solar, expand our wind but still keep our baseload energy going.

So thank you very much.

The CHAIRMAN. Gentlelady's time has expired. The Chair recognizes the gentlelady from California, Ms. Speier.

Ms. SPEIER. Thank you, Mr. Chairman.

Mr. Johnson, in your exchange with Mr. Cleaver, you spoke about the tax credits or I should say the tax cuts that you supported, and I think it is really important when you speak up on this issue that you be knowledgeable. The actual ARRA funding, the largest amount of money in ARRA is for tax cuts. It is \$288 billion in tax cuts. The next largest amount is \$275 billion which is, in fact, the money that is being distributed to try and create jobs. And then the third area is \$224 billion, which is unemployment benefits.

Now do you not support extending unemployment benefits and COBRA benefits for people who are out of work?

Mr. JOHNSON. No, I do not.

Ms. SPEIER. So two-thirds of the recovery bill you support.

Mr. JOHNSON. I support tax cuts when they are a stand-alone tax cut. If they are coupled with other measures the economic offset is far too great. The spending component of this bill completely skews the economy. These jobs would not be created. They are saying they are not taking jobs away from other people and, with all due respect, you need this money to create these jobs or the private sector would not create them on their own, which means they are not there yet.

Ms. SPEIER. Thank you, Mr. Johnson. I would like to give an opportunity to all of the other participants on the panel to respond to Mr. Johnson's criticisms and of your specific programs, if you would.

Mr. Ashley.

Mr. ASHLEY. Yes, just last week we were voted by the Wall Street Journal, we were named Number 2 VC-backed company in renewable energy and this week we were ranked Number 15 in the Wall Street Journal's top 50. There are people wanting to give us money in the private sector as well, but we need help from the government right now to expand faster and quicker just because debt is in such terrible shape in this country. Solar is getting, because of efficiency work that companies like us are doing much, much, much, more competitive in the market. And the people that are the antagonists of solar constantly use old pricing. They misuse the technology. When they are making comparisons of thin films in solar they use one technology to represent all of solar in a particular situation. It has changed a lot, and it is very viable. It is getting more viable.

But if we are serious about not letting the Chinese, the Taiwanese, and others own this industry, we need to do more here, just like they are doing. They think it is important. They are investing a heck of a lot of money. The rest of the world thinks it is important. We should, too. That is my point.

Ms. SPEIER. A follow-up question, Mr. Ashley. When the Section 1603 program expires, are you going to be able to continue to finance and construct in your industry?

Mr. ASHLEY. I believe so because of our worldwide demand, yes. I wish 1603 would continue to be expanded just to expand domestic demand for solar because it is good for the industry, et cetera, at this point in time. But the key right now is the financial situation that banks are in in lending, borrowing money, you can't get money. Even with a very positive scenario, the interest rates they want to charge you and the terms are very onerous and it is still very difficult.

Ms. SPEIER. Thank you. Ms. Wright.

Ms. WRIGHT. Well, I think quite simply if you take a look at where we believe the transportation industry is going to go in an uncertain time frame, whether it is over the next 5 years or 50 years, there is an awful lot of risk and technological uncertainty around how we will transport ourselves around, and the fact is the United States does not have the infrastructure to be prepared to make that transition. Over the past several decades we have allowed our manufacturing base to erode, become a service economy.

And frankly, while we are technology leaders we allow the countries around the world to implement it and commercialize it, and so from our perspective, one, we would not have been coming to the United States to do this. Two, we need to continue to expand our R&D and technological capabilities so that we cannot only catch up but start to lead. And that is risky. And private sector is not going to bear that cost all by itself. We are going to need strong collaboration with the government, and that is going to be skin in the game for private sector, skin in the game for the government as well.

So from our perspective we are a for profit company and we are for allowing market forces to take their course, but there are unnatural events and disruptive events taking place that are going to change how we get ourselves around and we have to do it as a partnership.

Ms. SPEIER. Ms. Patt-McDaniel, there were a lot of statistics that Mr. Johnson was spewing out that would suggest that weatherization is not working.

Ms. PATT-MCDANIEL. Well, same as we weatherized over 8,100 homes, and I would be the last person who has personally walked into those homes and seen the families who have benefited that this was not a worthwhile program. As far as Davis-Bacon, only 30 percent of our agencies had to adjust their payroll, which meant that those jobs were well paying in the first place. So Davis-Bacon certainly hasn't hampered the program. The adjustments were not significant.

And I think that I would be the last person also to say to the 1,000 men and women who were trained and are now working with a trade to weatherize homes shouldn't have had those programs and that we shouldn't have had the recovery money and that they shouldn't have had the opportunity to provide for their families.

Ms. SPEIER. Thank you, Mr. Chairman. I see my time has expired. Mr. Gaynor may or may not have a comment.

The CHAIRMAN. We have time. Go ahead.

Mr. GAYNOR. Thank you. From our perspective, if we take a long view on the policy of getting this country towards independent, more energy independent, then what the Recovery Act did in the short term is send a signal to the capital markets that the government is going to put some skin in the game, and that is certainly what happened. And I would argue that it was a crucial bridge that the government provided in the 1603. And from a long-term policy perspective, I think if you—again if we want to hit the energy independence targets and renewable energy targets you are going to need a policy that is sustainable and sends a signal to the capital markets, where most, if not all, of the money is going to come from over the long term, that the policies are there both at the Federal level and the State level. So that is certainly where we see the long-term play on the policy.

The CHAIRMAN. Thank you. Gentlelady's time is expired.

So, we had a great year in 2009. People were predicting that wind was going to just go right off a cliff, that we were going to drop from 8,400 new megawatts of electrical generation from wind in 2008 and because we were deep in a recession, because the economic climate was not good, that perhaps we could go down to only

4,000 megawatts of new winds that was generated in the United States. But then, because of the stimulus bill, we wound up producing 10,000 new megawatts of wind in the United States. And what a great story that is because just for people who aren't really familiar with this, that a nuclear power plant, 1,000 megawatt nuclear power plant, you think of a nuclear power plant that you might have heard of, Seabrook, Diablo Canyon, you name it, that is about 1,000 megawatts, a nuclear power plant. Ten thousand new megawatts of wind installed in the United States in 2009 alone. It went up when everybody predicted it was going to be cut in half. And so that is a tremendous story because obviously that wind is in the United States of America. Those facilities will be going for a long, long time. And as we move to electrifying our automotive fleet, the electricity that we are putting into the vehicles will be generated here in the United States. We won't be importing oil from OPEC. We can tell OPEC we don't need their oil anymore than we need their sand because we are going to start generating the electricity for the all-electric vehicles, for the hybrid electric vehicles here in the United States. So that is a tremendous story.

So let me go back over to you, Mr. Johnson, of the \$787 billion in the recovery package, \$288 billion of the \$787 billion were tax cuts. So did you support the \$288 billion worth of tax cuts?

Mr. JOHNSON. I support tax cuts on their own, not when they are coupled with a massive government spending—

The CHAIRMAN. But if we just made it a \$288 billion tax break program you would support that?

Mr. JOHNSON. Yes. Just the tax cuts.

The CHAIRMAN. So your problem was when we started giving out, extending unemployment benefits?

Mr. JOHNSON. I am opposed to unemployment insurance and massive government spending programs that tilt the market in favor of one sector over another.

The CHAIRMAN. You didn't like the unemployment benefit extension in the bill.

Mr. JOHNSON. I am opposed to the unemployment benefit extension, yes.

The CHAIRMAN. And I think that is important. It is an honest position to have that you oppose unemployment benefits extension. We are going to try to strap Congressman Cleaver in over here, okay, as he is listening to this. And also the same thing is true for extension of health care benefits to people who have lost their health care benefits, you also don't believe that that is a good expenditure of Federal money as well, is that correct?

Mr. JOHNSON. Yes, sir.

The CHAIRMAN. Okay.

Mr. JOHNSON. I do agree with that.

The CHAIRMAN. That is a fair—

Mr. JOHNSON. Unemployment insurance extension has been shown by several think tanks and organizations to prolong the unemployment process by making individuals more dependent on the Federal Government. And if I can address the statistics I was spewing on weatherization—

The CHAIRMAN. Spewing?

Mr. JOHNSON [continuing]. From the Office of Inspector General, a government agency, and they have a table right here and actually in California only .03 percent of units have been weatherized out of 43,400 that have been planned.

The CHAIRMAN. I get it. But let me get back to you, Ms. Patt-McDaniel, how many new jobs did you create in Ohio in 2009 from the weatherization project?

Ms. PATT-MCDANIEL. One thousand. And that is as of 2009. We are still counting.

The CHAIRMAN. That is great. So that is a lot of jobs, a lot of people who would not have been able to work.

So let's move over to you, Mr. Ashley. That is a great story that the wind industry has, 10,000 new megawatts. And what is the projection for 2010, Mr. Gaynor, in the wind industry? Then we will come to you, Mr. Ashley.

Mr. GAYNOR. Certainly at least 10,000 new megawatts.

The CHAIRMAN. At least 10,000 new megawatts?

Mr. GAYNOR. Certainly, from our perspective, we are building slightly less than we put online in 2009 but just ever so slightly, but the industry consensus is at least 10,000.

The CHAIRMAN. So if we did 10,000 megawatts of wind every year between now and 2020, that would be 110,000 new megawatts of wind on top of the 35,000 megawatts that the United States already has, the 10,000 in 2009, the 8,400 in 2008 and then much smaller numbers in the preceding years, but that would wind up at 145,000 new megawatts of wind installed in the United States by the year 2020 and the entire nuclear industry after decades of subsidies from the Federal taxpayers only has 100,000, has a total of 100,000 megawatts which is about 18 percent of all electrical generating capacity.

Is that a realistic goal for the wind industry.

Mr. GAYNOR. I certainly think that wind technology is improving. One of the things that everybody is concerned about is what is the price, what is the price of delivered wind? And I think with, when you, if you want to scale up to that level, doing 10,000 megawatts a year, increasing domestic manufacturing, you have to assume that with all of that additional capacity that will be built in the U.S. that the price per unit will come down, making wind a lot more competitive. So if that is certainly true, then you could see that the growth could sustain itself.

The CHAIRMAN. Let me go back to the point that I heard you make in your testimony, which was that 4 years ago only 25 percent of the components of a wind turbine were made in the United States, and in 2009, after the stimulus bill, the recovery package passed, it zoomed up to over 50 percent of the component parts of a wind turbine were made in the United States, is that correct?

Mr. GAYNOR. That is correct.

The CHAIRMAN. That is a huge turnaround.

Mr. GAYNOR. Those are the statistics from AWEA based on all the 1603 projects, and again we would expect that to continue as if you are going to keep adding megawatts, wind turbines are big, they are difficult to transport so having them made locally makes a lot more sense.

The CHAIRMAN. That sounds great. So you are saying during the Bush administration 25 percent of wind turbine component parts were made in the United States. During the Obama administration the percentage doubled to over 50 percent. So that is a huge shift from the Bush administration, which was clearly allowing for these component parts to be built overseas, that we had to import them from other countries. And clearly the Bush administration was just turning a blind eye to this incredible drain of revenue. But under the Obama position, we now see a dramatic increase in domestic production. We see a capacity being built here in our country and a turnaround from this Bush administration era perspective that had us importing oil from OPEC.

In fact, President Bush was over there asking the Saudis to please produce a couple more million barrels of oil a day in April of 2008, even as the wind turbines that we were installing in our country were being imported from other countries as well. What a disastrous policy for our country.

So now with this installation of new renewable energy resources in our country we see more domestic production, we actually see the jobs being created here in our country, and we are seeing a reduction actually in the importation of oil in our country. All of it great, especially with these new battery technologies that Ms. Wright and Johnson Control are beginning to manufacture here in our country which will make it possible for us to have these all-electric vehicles.

Mr. Gaynor.

Mr. GAYNOR. I agree with the statements. One other point to make is that, again, in order to hit these saturation levels in wind, battery technology is going to be a piece of that technical pie as well. And as I mentioned in my comments, we were awarded a conditional commitment from the DOE for one of our projects in Hawaii that we are building this year. It is a wind farm on the north shore of Oahu coupled with a battery energy storage system that is actually made by a domestic manufacturer called eStream Power.

The CHAIRMAN. By the way, in the Waxman-Markey bill, just for the record, we actually included \$60 to \$100 billion for carbon capture and sequestration technology for the coal industry. But of course Peabody Coal is leading the opposition to that bill. Peabody Coal. So it is not like we are not trying to help the coal industry. We are. But Peabody Coal doesn't want any part of our comprehensive bill to deal with the issue and so as a result we are not going to stop helping the industries that want to move forward. But we are not going to allow them, at the same time, the Peabody Coals of the world to say, don't make any progress at all on any front. We can't block—because we can't make progress on all fronts doesn't mean that we can't make progress on any front.

So let me come back to you, Mr. Ashley. Could you give us a little update on the solar industry, how many new megawatts were installed in the United States in 2009?

Mr. ASHLEY. Mr. Chairman, I have seen several figures. Between 450 and 480 megawatts.

The CHAIRMAN. Do you know how many were installed in the United States in 2008?

Mr. ASHLEY. Much less than that. I believe less than 300 megawatts.

The CHAIRMAN. So nearly a doubling of solar——

Mr. ASHLEY. Substantial increase.

The CHAIRMAN. Of solar installation in the United States, so almost as you are saying, it is like half of the nuclear power plant was installed in solar in the United States in 2009.

Mr. ASHLEY. Yes, sir, in our industry association the latest numbers look like probably around 10,000 direct, indirect and induced jobs in solar in 2009, thanks to the 1603 provisions, and 60 percent are——

The CHAIRMAN. Now when you say 1603 no one knows what you are talking about. They are trying to think of something famous that happened in history and they don't remember getting the right answer in the 6th grade, so people have no idea what you are talking about. What is 1603? What would be a good, give us another title for 1603 so that people would understand? Explain to your mother why this is so important. How would you explain it to her?

Mr. ASHLEY. It is taking a tax credit, which is a very good idea, and making it better because——

The CHAIRMAN. What would you call the program? Don't use the word tax credit.

Mr. ASHLEY. Solar incentive.

The CHAIRMAN. Solar incentive program, yeah, and so with a solar incentive program we were able to double the amount of solar in 1 year, produced here in the United States, creating upwards of 10,000 jobs?

Mr. ASHLEY. Yes, sir, that is correct. And I think going forward it will also be important to develop the domestic industry because even some of the foreign, my competitors that are foreign, will come here and build plants if the industry is big enough. I don't like that, but it is good healthy competition. Because I tell you Malaysia and China will give me a lot of money and a lot of grants to come build a plant like the one in Saginaw, Michigan.

The CHAIRMAN. So what percent of solar new jobs were created here in the United States as part of the Obama stimulus plan? Do you know?

Mr. ASHLEY. I believe the job numbers that I just mentioned.

The CHAIRMAN. So a very high percentage of all the new jobs that were created in the solar area were here in the United States?

Mr. ASHLEY. Yes. And to be fair, going back to the initial stimulus bill in December of 2008 when the tax credit was extended for 3 years or several years, et cetera, from that point forward and then when the Obama administration came in it really gave the industry a shot in the arm and the confidence to expand.

The CHAIRMAN. So what I am hearing is that there is a massive reindustrialization of the United States going on, that we have moved under the Bush era with only 25 percent of wind jobs here in the United States, and we import 75 percent, to now it is over 50 percent of the wind jobs are here in the United States, and the percentage keeps going up, as almost each month goes by. I think the ultimate goal is that 70 percent of all of the wind jobs will be here in the United States by the time the Obama stimulus package is completed, and that is a big good news story because people are

wondering where are the jobs for the next generation going to come from? What is the next new industry in our country?

So what we are hearing from Mr. Ashley and Mr. Gaynor and Ms. Wright are huge good news stories in terms of jobs here for Americans.

And Mr. Johnson seems to support using tax credits to accomplish these goals. He hasn't voiced any opposition to tax credits creating these incentives. So here we have a huge area of agreement, and an agreement—do you agree, Mr. Johnson, that at least in these areas that the tax breaks are working and we are creating these jobs that are helping to put people back to work in our own country?

Mr. JOHNSON. Tax cuts generally tend to do that, yes, Mr. Chairman.

The CHAIRMAN. That is great. So from the perspective of the billions of dollars that are going to be spent in wind and solar and batteries and other programs, that is good. You agree with that?

Mr. JOHNSON. Tax credits that stimulate the economy and create jobs are good.

The CHAIRMAN. That is great. So that is a big success story for us. And we do understand that you don't like spending Federal dollars on unemployment insurance for unemployed Americans, but what we are trying to, as you can probably appreciate, is we don't like paying unemployment benefits either. We actually hate the idea of unemployment benefits if people can have a job. So we are trying to create the jobs over here that could then make it unnecessary for people to have to go in and to actually apply for unemployment benefits.

The evidence that we actually have that people don't like to collect unemployment benefits is that when unemployment went down to 4 percent in our country, all the people who are now unemployed actually took jobs and worked in them. But when jobs are not available, unfortunately and much to their own personal chagrin, they are forced to go in to accept unemployment benefits. But we have evidence that every single ethnic group in the United States, whites, blacks, Asians, Hispanics, and male and female, all take jobs when they are available to them. But unfortunately, because of a recession induced by reckless mismanagement of the financial marketplace during the Bush administration, almost turning a blind eye to an oncoming economic disaster, we have seen a tremendously high rate of unemployment. So that is the conundrum that we face because we don't—the reason we don't want to pay unemployment benefits is that we hate to see people unemployed. But we recognize the moral necessity of helping people in those times of desperation. These kinds of programs are working and working very successfully.

Let me turn back to the gentleman from Missouri to see if he has any additional points he might want to make.

Mr. CLEAVER. One point and then a question. Having grown up in public housing around poor people, I grew up hearing that people had babies so they could get \$190 a month welfare and that people didn't work. My father worked on three jobs. He cleaned up the T.A. Litikan building on Saturday mornings, worked at the Wichita Club as a maitre d', and then did yards on the weekends

and sent four kids through college. I can remember my father being unemployed, one of the most miserable times of my life seeing him almost in a depression. But the question related to what I have just said is do you know how we know that, how we determine whether or not people get unemployment compensation? Mr. Johnson, do you know how we find out whether or not they get unemployment?

Mr. JOHNSON. Not off the top of my head.

Mr. CLEAVER. Yes. And that is why this is important, I think, because you said you thought it was a disincentive for people to get jobs. The only people who can get unemployment checks are the people looking for jobs. You have to go to the State Unemployment Bureau seeking a job to get unemployment compensation. So it is not a disincentive. The only people who get this are out struggling trying to find jobs. And as the chairman mentioned, they are not—8.4 million jobs, when you say disincentive, I just want to make sure you know that you have to look for a job to get the money.

So you don't think it is a disincentive now, do you?

Mr. JOHNSON. I still think it is. I have read several studies specifically from James Sherk, an economist at the Heritage Foundation, that say several things to the contrary of what you just stated, that it actually helps prolong individuals not finding work because they are satisfied by having—

Mr. CLEAVER. But you didn't know that you couldn't get that. You just said you didn't know.

Mr. JOHNSON. I didn't know off the top of my head. I had heard that.

Mr. CLEAVER. But now that you know, does that fact—you can't contradict that fact. It is a fact. So knowing that fact, do you now change?

Mr. JOHNSON. It is also a fact that since the stimulus package has been signed into law we have lost 3.3 million jobs. I am glad these individuals here are creating jobs. And the Ohio weatherization program is a huge success. I will grant them that. The Inspector General report even recognizes it as a success. But it is one of the only States having success with this program.

There are individual success stories everywhere. But the package as a whole and the reality is the jobs have not been created since the stimulus package and that was its goal, to create jobs. More work has been created for certain individuals who have jobs, but the overall jobs impact has not materialized.

Mr. CLEAVER. So now that you know that the fact that you have to be looking for a job to get an unemployment check, now that you know that to be a fact, it is unquestionable, if anybody in here can contradict it, you are saying you still believe that it is a disincentive?

Mr. JOHNSON. I oppose extending unemployment insurance benefits, yes.

Mr. CLEAVER. But will you continue to say it is a disincentive to provide those benefits?

Mr. JOHNSON. Until I see empirical data otherwise, based on what I have read and learned in the past, yes.

Mr. CLEAVER. So you don't believe what I was just saying, that you have to be—

Mr. JOHNSON. I would be very interested to see empirical data supporting what you are saying.

Mr. CLEAVER. That you have to be—how do you think you get the checks, people get checks?

Mr. JOHNSON. I am speaking of the disincentive issue. I have read reports that showed that it was a disincentive and it did disincentivize based on surveys, reports, et cetera.

Mr. CLEAVER. Okay, we are talking past each other. And when somebody makes a good point I always say, well, you made a good point. But since we can't do that, I appreciate very much you coming.

One of the persons I spend a lot of time with here is a Republican, and we absolutely have nothing in common with regard to our political views. We just like each other, and so we can argue and not get angry and still sit down and have lunch. The one thing I guess we don't do, which is why we have a relationship, is because when he can prove something, I say, okay, and the same on the other side.

So I guess my frustration is that if you can get anybody—I will wait here. Somebody call Heritage to find out if I made up the fact that that is the only way you can get your check, is looking for a job. I just—when you go out and say it is a disincentive and people don't know any differently, they then begin to embrace the beliefs that there are some people who are just lazy sitting around taking tax dollars. And I grew up in a situation like that, seeing it and hearing it, and it is really an insult to a lot of good, hard-working Americans.

So I do appreciate your being here and I appreciate your passion and hope that you will check my fact down there and send me an e-mail apologizing. Thank you.

Mr. JOHNSON. Thank you.

The CHAIRMAN. So, have you had—when you create these new jobs in solar or wind and weatherization, do you find that there are a lot of people who want to work as soon as you announce there are new jobs available? Do you have any problem finding people who want to work as soon as you put out an ad for new employees, Mr. Gaynor?

Mr. GAYNOR. No, we have not had problems. Just to give you one example, we have a small summer internship program. We received 10 times the number of resumes. For 10 jobs, we received 100 resumes.

The CHAIRMAN. You get 10 times the applications for new jobs as the number of new jobs you have.

Mr. GAYNOR. For our summer internship program.

The CHAIRMAN. Have you had any problem, Ms. Patt-McDaniel, finding people to work?

Ms. PATT-McDANIEL. No. We have people fighting to get into our weatherization training programs to get jobs; and the payment received is not family sustaining wages, by any stretch.

The CHAIRMAN. Ms. Wright, do you have trouble at Johnson Controls finding people who want to work when you advertise for new employees?

Ms. WRIGHT. We are very fortunate to have a skilled automotive workforce in the area where our plant is located, so we are very fortunate to be able to reemploy them.

The CHAIRMAN. People who got laid off when the auto industry collapsed and who were forced to accept unemployment benefits, as soon as you advertised saying you can come back to work they are on your doorstep?

Ms. WRIGHT. We have very, very highly skilled, experienced workers.

The CHAIRMAN. Beautiful. That is great news. Some people believe that people enjoy being unemployed. I think there is sufficient evidence that that is not the case when a job is offered.

Mr. Ashley, how about you? Do you find a lot of people?

Mr. ASHLEY. We had 600 applications for the last 30 jobs. A lot of people are desperate.

The CHAIRMAN. I agree with you. And, unfortunately, 570 people perhaps had to stay on unemployment, but you were able to help 30 people get meaningful employment. That is tremendous.

So here is the good news. You want to see a really good news story? Here is the picture of jobs lost in the United States, and this is the Bush administration over here in red. And as we reached January 20, 2009—we remember that day quite vividly, January 20, 2009—780,000 jobs were lost in January of 2009.

As you can see, following on a pattern of the preceding months of the Bush administration in terms of this failed economic policy—kind of, if you don't answer calls at the SEC, there is a guy named Madoff that might be bilking people, if you don't regulate derivatives or swaps, you kind of turned a blind eye to the whole impact that that could have, and many other things—780,000 jobs in the month before, 700,000 the month before, 720,000, really not a good picture, month after month.

Then, in February of 2009, the Obama administration arrives with a stimulus package. You can't turn around the Queen Mary overnight. But look what happened in the months since then coming up to February. We almost have a reverse image of what was happening during the Bush administration. Month after month, we see fewer and fewer jobs being lost in our economy. For one month there, November, it actually went positive. We actually had job creation. And now we are going down to a point where it is no more than 20, 30, 40,000 jobs that we are losing per month. So you can see it is highly likely that this is going to start spiking up with new job creation in our country.

Now, I would like to think that this economic plan of the President is working, that the stimulus bill is working, that the tax breaks are working, and that we are turning a corner and that the Obama plan is the antidote to the Bush plan, two different plans about how to run the economy.

Now we didn't cause the accident. We are out in the street trying to clean it up. Some people start to blame us for trying to clean up the accident, all that blood in our economy. So, after a year, some people start to basically confuse the people cleaning up after the accident with the people who created it. And that is one of our problems. We admit that. But it is a political problem from a mes-

saging perspective, not an economic problem from the perspective of how it is working.

And so what we are seeing in the testimony we are hearing today from our witnesses is the incredible success of the stimulus bill. And if I could ask you, do you think 2010, Mr. Ashley, will be better than 2009 for the solar industry?

Mr. ASHLEY. Yes, sir, I do. And, like I said, we are sold out through mid 2011.

The CHAIRMAN. You are sold out now. That is fantastic. Where would you be without the stimulus bill?

Mr. ASHLEY. We would not be in that situation.

The CHAIRMAN. You would not be.

Mr. Gaynor, what does 2010 look like for you?

Mr. GAYNOR. 2010 we expect to build 300 megawatts of capacity this year, seven wind farms, one of them we are just wrapping up.

The CHAIRMAN. Where would you be without the stimulus plan?

Mr. GAYNOR. It would be a much different picture.

The CHAIRMAN. Would it be a better picture?

Mr. GAYNOR. No, it would not be a much better picture. It would be worse. Tough to quantify, but, again, the thing that is important for our business is in a capital-intensive business you are taking—what the Recovery Act is doing is not only getting those dollars but you are taking a lot of dollars in the private sector and pulling it off the sidelines to come in and build wind farms.

The CHAIRMAN. So venture capitalists, other investors, they are on the sidelines. They are saying, oh, my goodness, look at all that blood in the economy; look at all that red. But all of a sudden, in 2009, with the stimulus bill, they are saying, maybe it is safe again; maybe we can go back into those economic waters. And if there is going to be some Federal money perhaps—and how many new private-sector dollars were you able to attract in 2009?

Mr. GAYNOR. Seven hundred million dollars.

The CHAIRMAN. Seven hundred million dollars just for your one company. Amazing. That is a huge amount of money.

Mr. GAYNOR. For the 1603 project—

The CHAIRMAN. Under the what project?

Mr. GAYNOR. The wind stimulus.

The CHAIRMAN. The wind stimulus bill attracted—unbelievable, just for your one company. That is fantastic.

And, Ms. Wright, over here, in your battery company, how many new jobs would you have created in the United States in 2009 and 2010 without the stimulus program?

Ms. WRIGHT. Very few.

The CHAIRMAN. By “very few”, what do you mean by that?

Ms. WRIGHT. Potentially some engineers in our Milwaukee—

The CHAIRMAN. When you say “some”, are you talking about hundreds?

Ms. WRIGHT. No, a handful.

The CHAIRMAN. What is a handful? Is that a handful? Five people maybe? Now, because of the stimulus bill how many do you think you will be creating?

Ms. WRIGHT. We will be hiring engineers and scientists in Wisconsin as we have—

The CHAIRMAN. Give us some numbers. People want to hear good news. People want to have hope that this economic recovery is going to continue and the stimulus bill is working. So how many new people do you think will get hired?

Ms. WRIGHT. If you will indulge me for a moment, the full capacity our plants in Holland will employ 550 people——

The CHAIRMAN. Your plant is where?

Ms. WRIGHT. Holland, Michigan.

The CHAIRMAN. Holland, Michigan. People think Holland is in Europe. No, Holland is in Michigan. So how many employees will you have in Holland, Michigan?

Ms. WRIGHT. At full capacity, it will be 550, not to mention the supplier and the indirect jobs. In Milwaukee, we will continue to hire engineers and scientists to support our technology.

The CHAIRMAN. Wow. So, without the stimulus bill, a handful, five; with the stimulus bill, 500 and more people who will be working who otherwise would not be working here in the United States. And you wouldn't even be building a plant in the United States, is that you what you told us?

Ms. WRIGHT. Correct.

The CHAIRMAN. You would be building it perhaps in Holland, Europe, is that right?

Ms. WRIGHT. In the Netherlands, Holland, somewhere in Europe or Asia, that is correct.

The CHAIRMAN. So that wouldn't be good news for American workers.

So this is really a fantastic good news story for our country. And this energy sector just might be the brightest of all the bright spots in the recovery bill because it gives hope to families that there is going to be a source of new jobs, from Mr. Cleaver and the smart grid they are building in the most economically challenged part of Kansas City, through Georgia with Mr. Ashley, and Mr. Gaynor's company that sprawls all across our country, Utah, Maine, and States all across the our great country. Ms. Wright is in Wisconsin and in Michigan with her new job creation.

Ms. Patt-McDaniel in Ohio with 1,000 people out there weatherizing homes in 2009, but many more in 2010—is that correct—will be out there? And you can't offshore weatherizing jobs. You have got to be there in Ohio, you have to be in Akron, you have to be in Canton. If you are not there, it is not going to get weatherized. So those are, by definition, domestic jobs.

So these are engineers, carpenters, laborers, scientists. It is across the entire economic spectrum of our country, the people who are benefiting. So that is really great news.

And it helps us to reduce—and here is where we will share our agreement with Mr. Johnson. It will reduce the unemployment benefits that we have to pay out of our taxpayers' dollars for people in our country, and that is one thing we really do hope to achieve.

Mr. Cleaver, do you have anything you would like to add here?

Mr. CLEAVER. You said it all, Mr. Chairman.

The CHAIRMAN. I thank you. Do you want to say it again?

I think we are just trying to make a point here. You know, a lot of people, they don't like—they didn't like statistics in school,

which is why they didn't take the course. But a graph like this speaks for itself.

It is the end of the Bush administration, the beginning of the Obama administration, just two different plans. In one, we were about to go off a cliff here with red ink for our country, people unemployed, 780,000 new people unemployed. You come forward 1 year, we are down 22,000 people who newly entered into the unemployment rates. What an incredible change, more than three-quarters of a million people fewer who were unemployed this past month than the last month of the Bush administration.

And so this energy sector is something that we are not going to walk away from. Your stories today really give us hope for the future. They really make us believe that we have a chance to create a new industrial sector in our country, to back out imported oil, to not replace "made by OPEC" with "made in China" without ever having a "made in the USA" energy strategy. What you represent is that alternative, the "made in the USA" strategy. We have used tax benefits, loan guarantees in the stimulus bill in order to accomplish that goal; and your story is tremendous.

So here is what I will do. I will give each one of you 1 minute to give us the one thought that you want us to remember, 1 minute apiece without using 1603 or the words tax credits. Try to put it in the simplest possible form for the American people so they can understand what has happened over the last year and what you want to see continue.

So we will go in reverse order; and we will begin with you Mr. Johnson.

Mr. JOHNSON. First, I want to thank the chairman and the members for allowing me to come here today.

I think in order to create real job growth, we need to consider freezing all proposed tax increases and costly regulations until unemployment falls at least below 7 percent, freezing spending and restricting unspent stimulus funds, reforming regulations to reduce unnecessary business costs such as reforming Sarbanes-Oxley, reforming the tort system to lower costs and uncertainty facing new businesses, remove barriers to domestic energy production in Alaska and the Outer Continental Shelf, completely repeal the job-killing Davis-Bacon Act, pass pending free trade agreements with South Korea, Colombia, and Panama, and reduce taxes on companies' foreign earnings if they bring those earnings home.

I think those are all sustainable, and we need to incorporate in all of the above energy approach working with the individuals here today. And I thank you very much for having me.

The CHAIRMAN. Thank you.

Mr. Ashley.

Mr. ASHLEY. Thank you, Mr. Chairman; and, again, I am proud to be here before the committee today.

The key thing I would like to leave you with is please continue to help us build this renewable energy resource, an economy here in the United States rather than abroad. Many of the countries are very serious about this industry. They want to own this industry. We want the jobs to stay here in the U.S.

We want to be competitive in the rest of the world. Programs like the Ex-Im Bank, and they are wonderful, offer facilities which we

have also used, and others are helping a lot and DOE loan guarantees. But the stimulus that you started and you are doing is really helping us, and it will make a big difference for jobs and I think the security of this country going forward.

The CHAIRMAN. Thank you, Mr. Ashley.

Ms. Wright.

Ms. WRIGHT. Thank you very much, Mr. Markey and committee members. Because of your actions, we have made a commitment to be here in the United States versus being somewhere else; and we have also made a commitment to stand up the industry and the entire value chain so we can drive domestic capability and competency.

We need your help in creating the demands. So, for short term, while the market is sorting itself out, we can drive scale, drive the economics so we can employ these people and we can employ them sustainably and stand on our own without subsidies and without incentives. Because that is how we want it to work. But I would implore you to help us make sure that we leverage these investments that the U.S. Government and the U.S. taxpayers have made and the faith they have put in us and make sure we leverage those vehicles and that demand with the components and the systems that were made from those tax dollars here in the United States so that we do have a U.S. battery cartel, not Asian battery cartel.

The CHAIRMAN. I love it. Thank you.

Ms. Patt-McDaniel.

Ms. PATT-MCDANIEL. I want to say that Ohio is very happy to make use of our Recovery Act funds. I already talked about our weatherization. We are using our other energy dollars to invest in the growth of those industries.

For example, in our wind supply chain, we have 600 companies who are providing parts to turbines and are also creating jobs. We continue to use that money to incent industry and leverage more growth and job creation.

I really appreciate the opportunity to speak, and we would like to have additional assistance from the Federal Government to continue to grow those jobs in Ohio.

The CHAIRMAN. Beautiful. Thank you.

Mr. Gaynor.

Mr. GAYNOR. Thank you, Mr. Chairman; and I also want to extend my thanks for allowing me to testify here today.

We are just at the beginning. We have got a long, long way to go; and I would encourage the Congress to continue to send those strong policy signals to the private sector. Over the long term, that is probably a Federal renewable energy standard. In the short term, as the financial crisis and the financial markets continue to heal, could be an extension of the convertible ITC.

So those are my parting thoughts. Thank you very much.

The CHAIRMAN. We thank you so much.

And I know everyone watching C-SPAN wants to learn more about a convertible ITC. But I understand what you are saying. But our job is to put it into English. So what we will do is we will pass a renewable electricity standard for the United States. So we have a goal of 15 percent, 20 percent of all electricity generated

from renewables because, by definition, they are here in America. We have to use our own energy resources to do that. And we will put the tax breaks, we will put the loan guarantees in place so that the private sector will step up and create this engine of growth in our own country, creating ultimately hundreds of thousands of new jobs just in this energy sector alone and, again, meeting the challenge of importing too much oil from OPEC and trying to avoid a situation where we are importing our batteries, our solar, and our wind technologies from China. We have to avoid it.

We need a plan. America is at its best when it has a plan, and the Obama administration has begun to put together that plan. We see the early results, which are fantastic; and we are now going to work to expand upon it this year and next.

We thank you all for testifying here today.

[Whereupon, at 11:30 a.m., the committee was adjourned.]

**RESPONSE OF PAUL GAYNOR, CHIEF EXECUTIVE OFFICER OF FIRST WIND,
TO THE ADDITIONAL QUESTIONS OF THE HOUSE SELECT COMMITTEE ON ENERGY
INDEPENDENCE AND GLOBAL WARMING**

As a follow-up to the March 10, 2010 hearing "*The Clean Energy Recovery: Creating Jobs, Building New Industries and Saving Money*", members of the House Select Committee on Energy Independence and Global Warming submitted five additional questions to Paul Gaynor, CEO of First Wind. The questions and Mr. Gaynor's responses are as follows.

Committee question 1. Regarding the financial challenges facing the wind industry, is the problem a lack of lending or is the financing rate too high? If the rate is too high, what internal rate of return would be necessary to finance the project? By what percentage does the grants-in-lieu program lower the interest rate offered in a financing package?

Mr. Gaynor: It is not a question of the cost of capital, rather just capital availability. The fundamental problem that the 1603 convertible tax credit was created to address was the lack of capital. With the collapse of credit markets in 2008, sources of capital dried up practically overnight, resulting in a credit and capital markets crisis that is still lingering today. Projections at the time suggested that the tax equity capital market might have only half the lending capacity necessary in 2009. The 1603 program was designed to fill in for that lending capacity that was lost when traditional sources of capital disappeared.

Committee question 2. At what point will wind generation be cost competitive with fossil fuel generation and, in turn, when can Congress phase out the existing subsidies in the form of the production tax credit?

Mr. Gaynor: Policies like the production tax credit (PTC) for renewable energy were enacted by Congress to provide renewables a level playing field compared with other subsidized energy sources. In the short term, without government support, wind and other renewables are less cost competitive with fossil and nuclear power that are themselves subsidized. With advances in technology and associated reductions in cost, wind power is making significant strides in becoming more cost competitive with other sources of electricity. And if Congress attached a price to the carbon emissions from fossil fuel combustion, wind would become even more competitive.

Committee question 3. Industries and small businesses all across the country faced financing challenges during the economic downturn. How do you justify grants-in-lieu for the wind industry as more deserving than other struggling industries and firms?

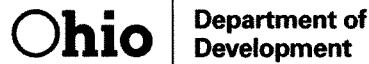
Mr. Gaynor: Clearly, many industries and businesses of all types and sizes across the country were hurt by the economic downturn and credit crisis. Accordingly, Congress acted to assist a variety of businesses and industries, including renewable energy. One of the primary goals of the assistance was to put people back to work immediately, which has been a result of the 1603 tax credit. For instance, the projects First Wind completed or began building in 2009 created over 1,000 jobs and pumped hundreds of millions of dollars into local economies.

Committee question 4. What percentage of the wind turbine components that were installed in 2009 were manufactured here in the United States?

Mr. Gaynor: According to the American Wind Energy Association, domestically manufactured components made up 53 percent of the wind turbine components installed during 2009 in projects that applied for the 1603 convertible tax credit. This represents substantial growth in the domestic supply chain, as 25 percent of components were manufactured in the U.S. in 2005. AWEA has said that continued growth in the domestic supply chain will be a result of stable and appropriate renewable energy policies.

Committee question 5. Is First Wind concerned that capital will once again disappear if the grants-in-lieu program is discontinued? How can the wind industry ensure stable, long-term access to capital without government subsidies to attract financing?

Mr. Gaynor: The Treasury's interpretation of what it takes to place a project in construction in order to qualify for the ITC means that the 1603 grant program will have little impact after the end of this year unless it is extended. Without the grant feature, there are very few entities that can currently monetize the tax credits, whether PTC or ITC. After the financial crisis, many of the legacy tax equity investors disappeared either because the firms went bankrupt or because they had no taxable income to use the credits. There are only a few big players that the whole wind and solar industry would be depending on to monetize the credits, allowing us to finance and build the projects. If the grant program were extended, that would provide time for more buyers to emerge or for a more efficient monetization structure to be developed before the PTC/ITC expires.



Ted Strickland, Governor
Lee Fisher, Lt. Governor

Lisa Patt-McDaniel, Director

**Follow-Up Questions to the Select Committee on Energy
Independence & Global Warming
Lisa Patt-McDaniel, Director
Ohio Department of Development**

1. By what criteria/standards are homes evaluated for qualified weatherization assistance?

- All families who have received assistance any time during the last 12 months under the Supplemental Security Income (SSI), or Home Energy Assistance (HEAP) (does not include Emergency HEAP) are automatically eligible for weatherization services.
- Households that do not live in federally subsidized housing, and do not supply their own primary heat source (i.e., owns a gas well or cuts their own wood), will generally be eligible for services if they meet the U.S. Department of Health and Human Services income guidelines listed below:

Size of Family	Poverty Guideline
1	\$21,660
2	\$29,140
3	\$36,620
4	\$44,100
5	\$51,580
6	\$59,060
7	\$66,540
8	\$74,020

****For households with more than eight (8) members, add \$7,480 for each additional member.**

What safeguards and policies does Ohio have in place to ensure that only the most necessary and qualified houses are weatherized?

Agencies must verify income based on the criteria above for each household and keep a copy of the verification in the client file for review by Ohio Department of Development staff.

77 South High Street
P.O. Box 1001
Columbus, Ohio 43216-1001 U.S.A.
614 | 466 2480
800 | 848 1300
www.development.ohio.gov

The State of Ohio is an Equal Opportunity Employer and Provider of ADA Services

2. How did your state overcome some of the obstacles encountered in almost all other states? What are the best lessons learned from the Ohio weatherization program that can be applied to other states struggling to implement the program?

We believe there are several reasons why our state was able to ramp up and respond to the needs of our citizens so quickly:

- An increase in weatherization funding in 2008 enabled agencies to purchase additional equipment prior to the passage of the American Recovery and Reinvestment Act.
- An existing, well-established network of weatherization providers was a critical component. The Office of Community Services allocated the Recovery Act Home Weatherization Assistance Program funds to the existing network on a formula basis to ensure that the entire state would receive program services.
- Many of the weatherization providers had lists of eligible households to be weatherized prior to receiving funding.
- The Ohio Weatherization Training Center, a well-established training facility operated by the Corporation for Ohio Appalachian Development, enabled new staff to be immediately trained. Also, the training curriculum was streamlined to quickly train and certify staff. Three training hubs were opened in addition to the main training center in Athens, Ohio to enable training without travel.
- The Office of Community Services noted early on that there were insufficient local inspectors available to review completed housing units. Working with the training center, plans were implemented to increase the number of inspectors hired and trained.
- The Office of Community Services provided a 10 percent advance of the individual grant amounts to weatherization providers, enabling agencies to purchase additional equipment such as vehicles and weatherization supplies.
- Finally, the Office of Community Services instructed providers to begin weatherizing houses on July 1, with weatherization staff salaries to be retroactively adjusted once prevailing wage rates were issued by the U.S. Department of Energy. Ohio began to ramp up for ARRA production in April of 2009.

We believe that other states could learn from the very strong program in Ohio, which started with a base of a strong state office, excellent training center, and a great network of agency providers. Our Department utilizes a weatherization provider network consists of 58 separate entities that cover the entire state. Other states should look to Ohio when considering ways in which to better implement a stronger weatherization program for many of the reasons above.

3. What is the average wage of a weatherization worker in Ohio?

The average wage is \$10.32 per hour, without fringes.

How much does the state pay per weatherized home?

The statewide average cost is \$6,332.78 per unit weatherize

4. What percentage of the total Ohio workforce is unionized?

14.2 percent of the wage and salary workforce in Ohio is estimated to be unionized (totaling 684,900 people), while 8.9 percent of the private sector in Ohio is estimated to be unionized (363,200 people).

16.0 percent of the private manufacturing employment is estimated to be unionized. In private manufacturing, Ohio is ranked eighth in the nation for highest percentage of unionized workers. (Washington is first, followed by West Virginia)

The first percentage includes government workers. The second percentage includes retail and service which has been the most active for elections in the last decade. The third percentage is the "traditional" measure of union activity but does not include construction workers.

Looking at Construction employment nationally, 16.7 percent of employment is covered by Union contracts for a reported average hourly rate of \$20.89. (The sample size does not allow for sector/industry analysis at the state level.)

Source: Union Membership and Earning Data Book, Compilation from the Current Population Survey, 2010 edition by Barry Hirsch and David Macpherson and published by the Bureau of National Affairs.

What percentage of weatherization contracts have been handed out to unionized companies?

At this time, we are not aware of any union contractors performing residential weatherization work through the state's program. In fact, most of the union contractors work on commercial and industrial jobs, instead of the residential projects supported through Ohio's Home Weatherization Assistance Program.

5. Ohio's "Banking on New Energy Financing" program appears to have the same goal of opening up access to capital as the ARRA's federal grants-in-lieu of tax credits program. To date, how much of the \$40 million in funding has been expended?

The program is in the process of finalizing selection of investment fund managers for the Ohio Energy Gateway Fund. It is anticipated that this step in the process will be completed by early May 2010, after which the program will be made available to potential borrowers.

Have firms in your state utilized this public-private partnership in addition to using the grants-in-lieu program? If so, can you estimate the additional lines of capital now available to those firms?

The fund has not yet been made available to firms. It is anticipated that this will occur in late May to mid June of this year.

6. Of the jobs created or saved, how many will be permanent jobs once the ARRA funding is exhausted? Do you believe this weatherization program is a sustainable industry?

The number of jobs that are permanent once funding through the federal stimulus has been exhausted is an unknown at this point. There is a possibility that some of the trained HWAP workers will work in energy efficiency programs funded with utility company dollars and/or renewable energy programs, but at this point, there is no discernable way to determine the amount of workers that will continue into permanent employment once stimulus funding is exhausted.

We do believe that Weatherization will continue to be funded by Congress, but not at the same levels experienced with the American Recovery and Reinvestment Act. The program has been in place long before federal stimulus money was added to the program, showing that there is a need for the program throughout Ohio over an extended period of time. If the recent investments and national push for "greener" technologies and lower energy costs is any indication, there is hope that the program could continue long beyond the federal stimulus.

7. How would the Waxman-Markey bill affect the energy costs of Ohio residents?

The Ohio Department of Development has not undertaken an independent analysis, though we are following the developments closely.



THE SELECT COMMITTEE ON
ENERGY INDEPENDENCE AND GLOBAL WARMING

April 1, 2010

Dear Mr. Ashley:

Following your appearance in front of the Select Committee on Energy Independence and Global Warming, members of the committee submitted additional questions for your attention. I have attached the document with those questions to this email. Please respond at your earliest convenience, or within 3 weeks. Responses may be submitted in electronic form, at Jonathan.Phillips@mail.house.gov. Please call with any questions or concerns.

Thank you,
Ali Brodsky

Ali Brodsky
Chief Clerk
Select Committee on Energy Independence and Global Warming
(202)225-4012
Aliya.Brodsky@mail.house.gov

1. In your submitted testimony, you note, "support from the federal government, in the form of the 48C tax credit, enabled us to add those jobs much sooner than we otherwise would be able to do." What were Suniva's previous expectations to increase the workforce? **We probably accelerated at least 30 jobs.** When would the additional employees have been hired? **Approximately 6 months later.** Are these jobs permanent jobs? **Yes.**
2. Currently, most photovoltaic (PV) solar cells are produced in China. What is the largest competitive disadvantage facing the United States today in the international solar production market? **The government of China supports its renewables (especially solar PV and wind) manufacturers with huge loans for expansion and capacity increases and also for domestic PV projects. They act in a matter of weeks vs. months to years for US programs to result in funds flowing to a US firm via the DOE loan guarantee program.**
3. What is the average employee wage at Suniva's production plants? **The average non-exempt wage is \$16 per hour.** Do those wages meet or exceed Davis-Bacon standards? **Yes.** Is the workforce unionized? **No.**

4. How do ultra-efficient cells compare in price per unit of energy to the current PV cells which are manufactured abroad? **The price per watt is about the same at the cell level, but more power can be produced in a smaller area at the module and system level with less balance of systems cost, meaning that with high powered cells the electricity costs less.**
5. Given that Suniva is “already sold out through mid-2011 and has had to turn away new export customers,” why does Suniva still need further government subsidies to ensure the viability of the business? **We want to expand quickly in order to scale up to compete with the Chinese for the long run and stop turning customers away. We must have help in financing the new production facilities in the form of incentives that can be monetized and/or loan guarantees.** What is the production cost of the cells compared to wholesale price and how much of Suniva’s costs are covered by federal subsidies? **So far, we have received no subsidies. Since 48C is not refundable and we have no tax liability yet, we have not monetized the credit. However, the 1603 solar provisions were a shot in the arm to the entire industry domestically, and gave us more confidence.**
6. Your testimony notes that Suniva has taken advantage of the grants-in-lieu funding contained in the stimulus. **If this is referring to 1603 provisions, we have not been able to take this ourselves as we are not project developers. If such a provision were available for the 48C incentive, we would immediately apply and this would allow us to monetize the incentive, which would greatly reduce our borrowing costs and leverage the amount we can borrow. Money is expensive and very tight. The 1603 provisions greatly helped the domestic demand for products like ours and this has been of a great help to our company.** Is that due to a pure lack of capital or is it that the financing rate is too high? If the rate is too high, what internal rate of return would be necessary to finance new projects? **We do not do projects ourselves, but we feel that it has absolutely been key to getting any projects moving during the financial crisis. Having said that, capital is very tight and very expensive through Venture Debt, which is the only available source.** By what percentage does the grants-in-lieu program lower the interest rate offered in a financing package over the previous use of the tax

credits? **As Suniva does not do direct installations, we do not have the necessary data to determine any interest rate reduction related to the grants-in-lieu program.**

7. Considering the King Juan Carlos University study last summer which highlighted the failures of government subsidies in the solar market, how can Congress ensure that the United States does not replicate the mistakes of the Spanish government, which is currently experiencing unemployment rates of 20%? **Much of the Spanish subsidies were excessive and no proper domestic content rules were enforced. This gave the Chinese carte blanche in the Spanish market along with financial speculators. This can easily be addressed by legislation here in the United States.**
8. Do Suniva's high efficient cells produce more electricity with less available sunlight? Do Suniva's PV cells generate energy when the sun isn't shining? **The photovoltaic process doesn't work without photons from the sun. Whenever there is sunshine, our cells do produce power but the level varies with the amount of intensity.**