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EMPOWERING WORKERS TO REBUILD AMERICA'S ECONOMY AND LONGER-TERM COMPETITIVENESS: GREEN SKILLS TRAINING FOR WORKERS

HEARING

OF THE

COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS

UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

ON

EXAMINING EMPOWERING WORKERS TO REBUILD AMERICA'S ECONOMY AND LONGER-TERM COMPETITIVENESS, FOCUSING ON GREEN SKILLS TRAINING FOR WORKERS

APRIL 21, 2009

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EMPOWERING WORKERS TO REBUILD AMERICA'S ECONOMY AND LONGER-TERM COMPETITIVENESS: GREEN SKILLS TRAINING FOR WORKERS

TUESDAY, APRIL 21, 2009

U.S. SENATE,
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,
Washington, DC.

The committee met, pursuant to notice, at 10:33 a.m., in room SD–430, Dirksen Senate Office Building, Hon. Patty Murray presiding.

Present: Senators Murray, Sanders, Brown, Casey, Hagan, Merkley, and Enzi.

OPENING STATEMENT OF SENATOR MURRAY

Senator MURRAY. This hearing of the Health, Education, Labor, and Pensions Committee will come to order. I am pleased to be chairing a hearing on this topic, so important to our Nation's competitiveness and long-term economic strength, to ensure that our American workers have the skills to succeed in this new, green economy.

First of all, I want to send our warmest wishes to our Chairman, Senator Kennedy, who continues to be a great champion for America's workers.

I also want to thank Senator Enzi, our Ranking Member, and Senator Isakson, who I believe will be here and serves as our subcommittee. Both of them have been very strong partners in making sure that our workers have the skills to compete in a global workforce.

I also want to welcome our newly confirmed Labor Secretary, Secretary Solis, to the Hill today. I believe this is your first hearing, welcome.

While it is your first hearing, we have had a lot of conversations already about the challenges facing our workforce as we work to pull ourselves out of this economic recession, so I look forward to hearing from you and working with you to help ensure a strong workforce for America.

I also look forward to hearing our second panel of witnesses, who are here with us today. We have several experts from the State of Washington. Dean Allen, who is the CEO of McKinstry Company, a company which has been on the cutting edge of the green building industry.

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Lee Lambert, who is the President of Shoreline Community College, and Mr. Phil Lou, whose green training at Shoreline has opened up a new career of opportunities for him.

I am, I must tell you, thrilled to have so many Shoreline Community College folks represented here. I worked there in my earlier career, I know it's a great school, and I know they're committed to preparing students to succeed in the work world.

I want to thank all of you for traveling so far to be here as witnesses for our committee today.

As we look forward to Earth Day, it's appropriate that we're here today to talk about how we can re-tool our workforce for the green economy. It's going to take a skilled, green workforce to free our Nation from dependence on foreign oil, and build a stronger and more sustainable economic future.

From solar panel installation, to green building to retrofitting our homes and offices, the jobs of tomorrow start with increased training efforts today. Not only will it help us all to be more energy efficient, it can help our communities and our working families rebuild for a stronger and more sustainable economic future.

The debate about what, exactly, constitutes green energy is complex. We'll look to our colleagues on the committees on Energy and Natural Resources and Environment and Public Works as well as the Obama administration to help inform us about the future of America's energy and environmental policies.

Leaders like Senator Sanders, who will be with us shortly, who is the chairman of the new Subcommittee on Green Jobs in the New Economy, can help all of us better understand how Federal policy can move our Nation toward a sustainable energy future that will create new green-collar jobs.

America's working families deserve nothing less than a strong and effective partnership among their elected representatives to achieve this goal. Together with today's efforts to examine how we can best provide workers the skills to thrive in green industries, we can begin to build a stronger and more sustainable economic future.

What exactly is a green job? Well, there isn't a hard and fast definition. These jobs tend to provide products and services that promote renewable energy resources, reduce pollution, and conserve energy and natural resources in any industry.

We also know that they are not confined to skilled trades or professional occupations. Like any in-demand sector they're cross-cutting and able to reach workers of all ages and skill levels.

For some, going green at work means applying the skills they already have to a new, more sustainable context—like the construction workers who lend their talent to building energy efficient structures.

For others, it means retraining for a new career, or upgrading their existing skills, and that's where we can be most helpful.

When Congress passed the Workforce Investment Act in 1998, we intended for it to support the needs of workers, job seekers, and the businesses that grow our economy. Since the authorization expired almost 6 years ago, those of us who believe in this legislation's goals have called for both its modernization and renewal.

Many of us on this committee have kept up the drumbeat for reauthorization. Senator Enzi, as we well know, takes every opportunity to voice his support for reauthorization—I'm pretty sure he'll do that again today—and I appreciate all of his efforts.

We have let Secretary Solis and others in the Administration know of our commitment to moving a bill forward this year. Together with Senator Kennedy and Senator Isakson we began the process by hosting a number of listening sessions with everyone from educators and business leaders, to workforce and economic development experts, organized labor, and many others.

We've heard from organizations like "Green For All" about how those opportunities can help lift Americans out of poverty. The Vice President's Middle Class Task Force has focused on how green jobs can help strengthen and expand the middle class, and provide opportunities for those who may not know that it was in their reach.

We have great opportunities for improving the system to make it work for both businesses and workers, and ensuring our ability to adapt to a changing and greening economy.

Going green will require us to get serious about worker training, and with record investments in creating green jobs in the Economic Recovery Act, now is the time to ramp up our efforts.

That law invested billions of dollars in job creation with a focus on energy efficiency and sustainability, greener infrastructure development, and environmentally sound public works.

At the same time, we also invested in America's workers in their ability to secure those jobs and move up a career ladder. We provided $4.2 billion for job training and placement services, and, consistent with the Green Jobs Act, we directed $500 million of those funds to the task of preparing workers for green economy jobs.

We requested that Job Corps participants learn about green construction practices by directing funding to teach students to retrofit the very centers they live and learn in. We know that manufacturing and construction sectors have taken some of the hardest hits in this economic downturn, so we directed the Department of Labor to emphasize green skills development and dislocated worker programs under WEA.

I look forward to hearing from Secretary Solis about how those funds are being distributed, and about a vision for incorporating green skills into a long-term plan for economic growth and strength.

With that, I will turn it over to our ranking Republican, Senator Enzi, and thank you so much for your help in putting this committee together today.

STATEMENT OF SENATOR ENZI

Senator ENZI. Well, thank you, Madam Chairman, I thank you for holding this hearing to discuss the issue of green skills training for workers. I also want to welcome the Secretary for her first appearance before the HELP Committee since her confirmation.

I'm pleased that we'll be joined on the second panel by Joan Evans, Director of the Wyoming Department of Workforce Services. Because Wyoming has substantial energy production, I believe that Director Evans will bring an important perspective to this discussion, and I look forward to introducing her at the appropriate time.

I am also pleased that we have the representation of community colleges here. Wyoming thrives on community colleges, and I've noticed that they are able to turn on a dime to meet new needs and do new training.

President Obama has made green jobs a central part of his plan to rebuild the Nation's economy. He's stated on a number of occasions about the need to transition to a clean energy economy. I support the President's goal of increasing our clean energy production, and I hope the President understands that we need an inclusive strategy when it comes to addressing our serious energy challenges.

My home State of Wyoming is at the forefront of our Nation's energy efforts, as we have an abundance of energy resources. We provide the Nation with the coal that generates the electricity for more than half of our Nation's homes and businesses. For this reason, we must recognize the critical role that coal plays—and will continue to play—in our Nation's economic stability and energy stability.

Southeast Wyoming is one of the best places in the Nation for wind energy development, and Wyoming has some of the best potential for solar energy development, as well.

However, today we're not focusing on energy policy, instead we're talking about the importance of having a skilled workforce, and making sure that we have the education and training programs necessary to meet the skill demands of the 21st Century jobs, including green jobs.

The strength of our current workforce system is that it is demand-driven. We need to consider whether we are creating a demand for green jobs, or if we are responding to a true market demand for more workers to fill green jobs.

The education and skills training for green jobs must be connected to the larger workforce system, so that we are not duplicating the efforts of the current Workforce Investment Act system. I had to get that in.

[Laughter.]

We can not afford to create a parallel system of job training, and put additional silos to our Workforce system.

The Stimulus bill included $500 million for jobs training projects that prepare workers for careers in energy efficiency and renewable energy. I encourage the Department of Labor to coordinate with the other Federal agencies targeted for stimulus funding, to address green jobs.

Coordination is particularly critical when other agencies—such as the Department of Energy, the Department of Transportation, Department of the Interior and the Environmental Protection Agency—have little connection to the workforce system in States and communities across the country.

As we discuss green jobs, it's also important to examine whether green jobs are new occupations, or whether green jobs are existing jobs that require a new layering of green skills. For many occupations, training workers for green jobs can be as straightforward as training them for the jobs in the existing career sector, without any adjustment, or with slight modification to incorporate specific knowledge and skills for the green aspects of the job.

While it may be appropriate to do the extra work to help bring these additional skills needed to the work in a green-related field, we should focus on making sure that we're providing workers with the core knowledge and skills they need to be successful in the 21st Century workplace, and the global economy.

While I believe it's important to understand the skills needed for workers to be successful in green industries, I think we should be addressing the workforce development system overall, by reauthorizing the Workforce Investment Act.

I look forward to working with Secretary Solis and my Senate colleagues this year to renew and improve this important act. We've come close before, we need to get it done.

I look forward to hearing what the witnesses have to say today. Thank you, again, for taking the time to share your views about green jobs and skills needed as we address these emerging issues.

Thank you, Madam Chairman.

Senator MURRAY. Thank you very much, Senator Enzi.

We have several members who would like to make opening statements. We will turn to each one of them.

Senator Brown.

STATEMENT OF SENATOR BROWN

Senator BROWN. Thank you, Madam Chair.

Thank you to Secretary Solis, nice to see you again. When we worked together in the House, clean energy jobs was a policy idea, now it's a reality. Your vision and leadership have contributed in no small measure to that. Thank you for that.

I'm particularly interested in the thoughts of the Secretary, and the panel, on the specific industries in which you all envision creating these clean energy jobs, and what regions of the country you see these jobs programs having the greatest impact.

I've held about 140 roundtables in going to each of Ohio's 88 counties—listening to people talk about how we get our economy, an economy that's been in recession longer than the national recession, back on track.

One of the central messages I hear from dislocated manufacturing workers, is the need to update their skills, to get jobs in emerging clean energy technology and those sectors of the economy. They rightly perceive these sectors as a major force in economic recovery, both in their communities, and across our country.

Two weeks ago, I hosted a conference in Washington for Ohio's college presidents, about 50 of them attended. Senator Murray, in fact, was our keynote speaker, and she talked—very persuasively—about workforce policy.

One of the major topics that's surfaced and resurfaced throughout this conference was actually a question—how do we better coordinate between and among institutions of higher education, and sectors of our economy where there is unmet demand for workers? Clean Energy Jobs Initiative is key to that effort.

Community colleges across the country are reporting a surge of unemployed workers as we are now enrolling in courses that offer training for clean energy jobs. At the Upper Valley Joint Vocational School in Piqua, OH, in southwestern Ohio, students are learning how to install solar panels, repair and manufacture wind turbines,

produce biofuels, do other work related to renewable energy. With recovery bill funds, they could support even more students and manufacturers in Ohio and Pennsylvania, and North Carolina and all of our States.

Clean energy jobs also include core manufacturing and services like electricians and welders and pipe fitters—workers who can transfer their skills from other industries to new, greener technology. There's no doubt that these clean energy jobs—along with jobs in other emerging industries—can transform our economy. Aligning our educational system to the need for new skills training will go a long way toward turning the promise of green and other new manufacturing jobs into the reality of a more robust U.S. economy.

We can't rely on educational strategies alone to get there. We should make the R&D tax credit permanent, and pursue trade policies that are actually aligned with our trade goals. Making the tax credit permanent is a straightforward task, modifying our trade policy in which Secretary Solis was a leader when she was in the House of Representatives, should also be a straightforward task, but is encumbered by ideological battles, too often wrapped in misleading rhetoric of accusations of protectionism. Both tasks are essential.

And last, Madam Chair, Oberlin College—15 miles, or so, from my home—has the largest building on any college campus in America fully powered by solar energy. That's the good news. The bad news is Oberlin—some 4 or 5 years ago—bought all of its solar panels in Germany and Japan, simply because we didn't make enough in this country.

In Germany, employment in clean energy reached a quarter million in 2006. It's estimated to reach a half million by 2020. There's no worries in that the workers in Ohio, Washington, Oregon, Pennsylvania, and North Carolina can't do these jobs, and do them as well, or better, than German workers have.

We're starting to see that already in Toledo. Known for decades as a glass city, Toledo is one of the major glass manufacturers in the country for solar, and produces more thin-film solar panels than any other facility in the country.

Another company, Xunlight, started by a Chinese immigrant, has gone from 30 employees to 80 employees, and will soon expand to double that number as they put another production line on their plant in northwest Ohio.

We know we can do this, it's a question of government working with workforce investment groups, working with community colleges, working with labor, to do this right.

Thank you, Madam Chair.

[The prepared statement of Senator Brown follows:]

PREPARED STATEMENT OF SENATOR BROWN

Thank you, Madam Chair.

Thank you to Secretary Solis. When we worked together in the House, green jobs was a policy idea.

Now it's a reality—and your vision and leadership have contributed in no small measure to where we are today.

Green jobs are playing a significant role in our country's economic recovery and in the revitalization of our Nation's middle class.

I am looking forward to your testimony, and that of our second panel, and to discussing strategies for implementing the green jobs program in the American Recovery and Reinvestment Act.

In particular, I am interested in your thoughts on the specific industries in which you envision creating these green jobs, and in what regions of the country you see a green jobs program having the biggest impact.

I've been holding roundtables throughout Ohio. I held more than 140 roundtables since taking office to hear Ohioans' thoughts on how to get our State economy and our national economy back on track.

One of the central messages I hear from dislocated manufacturing workers is that they need to update their skills to get jobs in emerging green energy and tech sectors of the economy. They rightly perceive these sectors as a major force in economic recovery—locally and nationally.

About 2 weeks ago, I hosted a conference in Washington for Ohio's college presidents. Senator Murray, in fact, was our keynote speaker and showed why she is such a leader on workforce policy.

One of the major topics that surfaced and resurfaced throughout the conference was actually a question: How do we better coordinate between institutions of higher education and sectors of our economy where there is unmet demand for workers?

The green jobs initiative is key to that effort.

Community colleges across the country are reporting a surge of unemployed workers enrolling in courses that offer training for green jobs.

For example, at the Upper Valley Joint Vocational School in Piqua, students are learning how to install solar panels, repair and manufacture wind turbines, produce biofuels and do other work related to renewable energy. With ARRA funds, they could support even more students and manufacturers in Ohio.

Green jobs also include core manufacturing and services, like electricians, welders, and pipe fitters, who can transfer their skills from other industries to new green technologies.

There is no doubt that green jobs, along with jobs in other emerging industries can transform our economy. Aligning our educational system to the need for new skills training will go a long way toward turning the promise of green and other new manufacturing jobs into the reality of robust, U.S. economic growth. We can't rely on educational strategies alone to get there.

We should also make the R&D tax credit permanent and pursue trade policies that are actually aligned with our trade goals.

Making the tax credit permanent is a straightforward task. Modifying our trade policy should be a straightforward task, but is encumbered by ideological battles wrapped in misleading rhetoric.

Nonetheless, both tasks are essential.

Oberlin College, near Cleveland, has the largest building on any university campus in the United States fully powered by solar energy. However, Oberlin College had to buy the parts for its system

from Germany and Japan because we do not make them in the United States.

In Germany, employment in clean energy reached 260,000 in 2006 and is estimated to reach 500,000 by 2020.

There is no reason that workers in Ohio, or Washington, or California can't be building the solar panels, the fuel cells, and the wind turbines that go into the production of alternative energy.

In fact, we are starting to already. Outside of Toledo, known for decades as "Glass City," First Solar produces more thin-film solar panels than any other facility in the country.

Rising international demand has led the company to double the size of staff in the last 2 years.

We have a base of manufacturers and expertise in Ohio that, if supported, can lead the State and the Nation.

At roundtables and other forums, I often ask people to tell me what American manufacturing will look like in 10 or 20 years.

I'll end by posing that question to you and the second panel, and look forward to your thoughts.

Thank you, Madam Chair.

Senator MURRAY. Thank you.

Senator Casey.

STATEMENT OF SENATOR CASEY

Senator CASEY. Thank you so much. I want to commend Senator Murray for bringing us together today, and for her work in this whole area of inquiry that we're examining today.

I want to thank the Secretary for being here. We want to welcome you back to Capitol Hill, you've been here as a member of Congress, but also now in your new capacity as Secretary of Labor. We're grateful for your presence, here, and the testimony you'll bring, but also for, in a larger sense, for your service—your continuing public service.

There are a few issues that we could be examining that are more important than this. The potential in my home State of Pennsylvania to create—and to sustain the creation, over time—of green jobs is enormous.

I would reiterate what Senator Brown said—tremendous potential here for so many places in the country. It's important that we get the strategy right, so we can take full advantage of that capacity and that potential. Again, we're grateful for your service, and we look forward to talking to you about these issues today.

Thank you.

Senator MURRAY. Thank you.

Senator Hagan.

STATEMENT OF SENATOR HAGAN

Senator HAGAN. Thank you, Madam Chairman.

And Secretary Solis, I also want to welcome you.

North Carolina is about the fifth-largest State in unemployment right now, we're approaching over—close to 500,000 people unemployed. I know that we have a wonderful number of people who could work in the green industry. What's so good about those jobs, is those jobs will not be outsourced. We do need to—as Senator

Brown said—be making those solar panels and batteries and wind turbines in our country.

During this past recess, I was at Appalachian State University in Boone, NC, and the students are so excited. They're doing a number of things using wind power. They've got a car where they're testing the emissions of the fuel, whether it's canola oil, poultry renderings, all sorts of different types of fuels, and they are actually studying the emissions from that.

I think the capacity is huge, and we also have a large biotechnology sector in North Carolina focused on biofuels. Anything that we can do to promote green industry jobs, jobs, jobs, is what we need to be doing at this point in time.

I look forward to your testimony, and to helping move this country forward in green jobs.

Thank you.

Senator MURRAY. Thank you.

Senator Merkley.

STATEMENT OF SENATOR MERKLEY

Senator MERKLEY. Thank you very much, Madam Chair.

Welcome, Secretary, it's a delight to have you with us, and to have your emphasis on creating jobs for working families.

Oregon's unemployment is now 12.1 percent, has been exceeded only once, in 1982. We are focused, absolutely, on how we can create a partnership between working on environmental issues, and creating jobs for our working families.

There's many exciting things going on in Oregon, as there are in the other States. Solar World has opened a plant that will be one of the largest producers of solar panels in the Nation, sequential biofuels has opened up a new plant, ramping up from a million gallons to five million gallons. We have traditional manufacturers working on producing devices to help create wave energy, which is a real potential yet to be exploited, so on and so forth.

We have enormous opportunity. Just an hour ago, I was meeting with a Danish member of Parliament, Sven Dokken, who is really a driver in ending Danish energy dependence, and their susceptibility to oil shocks, and creating a surplus and turning those oil shocks to Denmark's advantage. They profit when the price of oil goes up. He wanted to emphasize the point that as they created a surplus of energy, they de-linked energy from the economy—that is, their economy grew enormously while consuming less energy, and in the course, created millions of jobs within their Nation. So, we can certainly do the same.

Thank you for coming.

Senator MURRAY. Thank you very much.

Senator Enzi asked to give you his apologies. He's going back and forth between a Finance Committee, but he will return shortly, and we do have your written statement.

Secretary Solis, again, welcome to the committee, and we look forward to your testimony.

STATEMENT OF THE HONORABLE HILDA SOLIS, SECRETARY OF LABOR, WASHINGTON, DC

Secretary SOLIS. Thank you, Madam Chair, and to Ranking Member Enzi, and to the members of the committee, I'm very pleased to be here, this is my first official hearing as, you know, the last time I was here was during the confirmation.

I'm pleased to be the 25th Labor Secretary, and proud author—along with my other colleagues—of the Green Jobs Act. As a Member of Congress, we worked for many years on passing that legislation, so as you can tell, I'm very delighted to be here, to be able to talk about this particular topic, something that we hold very close to our hearts, those of us that worked on this. I know Senator Sanders was a part of that initiative, as well, on the Senate side, so I want to thank him publicly.

I appreciate the opportunity to discuss the role of green jobs skills training for workers in the larger context of rebuilding America's economy, and promoting long-term competitiveness.

It's no secret that our economy is in dire straits, and Americans are struggling. Earlier this month, the Bureau of Labor Statistics reported that the national unemployment rate reached 8.5 percent, the highest in 26 years.

In many States, the situation is even more severe. In March, the unemployment rate was 9.2 percent in Washington State, 11.2 percent in California, and 12.1 percent as Senator Merkley mentioned.

In my own home town in California, the city of Almonte, the unemployment rate is 13.9 percent. Meanwhile, the rates of joblessness among minorities is even higher. Latinos are unemployed at a rate of 11.4 percent, and African-Americans are unemployed at a rate of 13.3 percent.

When you talk about our young people, our youth, teens are also experiencing high levels of unemployment—21.7 percent.

Our Nation has lost 5 million jobs since the recession began 2 years ago, December 2007. The number of long-term unemployed rose to 3.2 million over the month of March, and has increased by 1.9 million since the start of this recession.

Investing in our Nation's workforce and creating a positive environment for new jobs has to be a critical component of our efforts to restart, and re-jump our economy.

You have my full written statement before you, so I won't read it all, but I'll just hit some high points that I think I would like to stress.

First, green jobs, as you know, will play an important role in our economic recovery. The promise of green jobs is not only to help restart the economy and put Americans back to work, but it will also help America become more energy independent. Investing in our Nation's clean energy future will secure America's energy supply, and at the same time, promote economic stability and an advancement for all of our communities.

Many green jobs are in the construction and trades, and these jobs will tend to pay more than above-average salaries. The occupational employment and wage estimates indicate that construction and extraction operations pay a medium hourly rate of $17.57, as compared to $15.10. We can expect that many of these green jobs will pay 10 to 20 percent better than other jobs, and many will be

union jobs that provide economic security for the middle-class families, while at the same time reducing our Nation's energy dependence.

Furthermore, these are also jobs that traditionally can not be outsourced, as was stated by some of the members on the panel.

This brings me to a second point. We're already making investments toward greening our economy and preparing our workforce for the 21st Century. The American Recovery and Reinvestment Act of 2009, signed by President Obama on February 17, 2009 is the most significant single investment our Nation has ever made to ensure our future economic success.

For its part, the Department of Labor's Employment and Training Administration Program, ETA, has already made available $3.47 billion in Recovery Act funds to support workforce investment activities, such as retraining dislocated workers, summer employment for youth, community service employment for low-income seniors.

We're also developing grant solicitations for $500 million for high-growth job training projects, including green jobs. These projects will train workers for careers in energy efficiency, and renewable energy industries, so that a qualified American workforce is ready to meet the needs of our country's expanding green industries.

Unemployment data show that young people, people with disabilities, African-Americans and Hispanics are facing unemployment rates in double digits. Green jobs, in my opinion, can provide an opportunity to rebuild our communities in a more equitable and fair manner, inclusive of all Americans, regardless of their socioeconomic background.

In order to realize this opportunity, however, we are prioritizing access and inclusion in these programs; for low-income workers, for unemployed youth and adults, for high school dropouts, or for other underserved sectors of the workforce within high-poverty areas. Included in this is a component to help provide more support for women, because as you know, women are also faced with a hardship at this particular time.

These are some of the communities that are hardest hit by the recession, and they too will have an opportunity to benefit from the growth in the green jobs in our economic recovery.

The Department of Labor is also promoting green jobs across all of the workforce investment programs. We have issued guidance to States to help implement the Recovery Act-funded job training provisions, noting that the energy efficiency and renewable energy industries offers workers new opportunities that may require additional training and certification.

The Department of Labor has encouraged States to expand existing training programs, such as registered apprenticeships that have the potential to prepare workers for careers in renewable energy, and in other green jobs.

Other examples of how we're working to leverage our resources responsibly within the DOL programs to promote green jobs include the following: the Department of Labor Veterans Employment and Training Service Program, the VETS Program, will soon

release a solicitation for grant application to promote green jobs trainings for veterans.

The Bureau of Labor Standards is currently developing approaches to measure what green jobs are, and where that growth will occur, so there will be surveys that will be taken in different workplace industries where green activity is expected to occur.

Future construction and repair of Job Corps facilities will also be incorporated in green technologies. Job Corps will also develop and implement green job training in their curricula, for youth to also be able to learn from these new employment opportunities.

Furthermore, I'm very interested in greening the Nation's workforce system, that's the entire WIA system. To ensure that the system and its partners are fully connected, and committed to sustaining the green economy, both in current jobs and emerging occupations.

Then finally, I'd like to highlight how our green jobs workforce training efforts will be even more effective in aiding our global economic recovery if we work together with our partners, the U.S. Government and around the world.

Two weeks ago, I had the privilege of attending my first meeting of the G8 summit with labor ministers. At that meeting, we focused on the human dimension of this economic global crisis. In each plenary session and bilateral meeting, my fellow labor ministers raised the issue of green jobs. There were three points that were very clear to me in their conversations: we must first work globally to address the economic crisis, green jobs are an important component of this global economic recovery, and the world is definitely looking to the United States for its leadership.

My colleagues in the Cabinet and I recognize that our investments can not be done in a vacuum. The Department of Labor and other Federal agencies have already begun to coordinate our work to strategically implement programs that ensure the connection between investments and infrastructure, research and development, to job training and worker placement.

For example, the Department of Energy, specifically, the Department of Labor is working with them to ensure that workers who are hired in new jobs, in particular, weatherization, receive prior training. It's imperative that these be good-paying jobs, and there be some form of standardization for certificates.

HUD, another agency that my staff has been working with lately regarding greening of public housing, to promote training and hiring of unemployed residents who are actually in those facilities.

I believe there is still many more linkages to be made between green jobs and the recovery of communities hit the hardest by this economic downturn.

For example, the Department of Labor is also playing a vital role in supporting the economic recovery of communities that depend on car manufacturers and related industries. Many of these communities are passionate about green jobs—being a part of their future economic success, and the Department will work hard to ensure that they not only survive, but that those communities also thrive in this recovery.

I'm proud to be a member of Vice President Biden's Middle Class Task Force. At a recent meeting in Philadelphia, and I quote, he

said, "We'll measure our success, whether it's 4 years or 8 years, by one thing—if we can raise the standard of living for middle class people." I couldn't agree more.

While we deal in facts and figures and charts, we must also remember the numbers behind the economic downturn, and the economic recovery, and that is the faces of our community, our constituents, the people that we represent.

I believe that green jobs, if implemented correctly, can create an opportunity to lift all Americans' boats, to regain economic security, and can help us green our economy, and can help us assert our leadership in the global economy.

Madam Chair and members, I thank you for the opportunity to come forward and talk to you about this very important discussion. Thank you.

[The prepared statement of Secretary Solis follows:]

PREPARED STATEMENT OF HON. HILDA L. SOLIS, U.S. SECRETARY OF LABOR

Chairman Kennedy, Ranking Member Enzi and members of the committee, thank you for the invitation to testify today. As the 25th Labor Secretary and the author of the Green Jobs Act (Title X of P.L. 110–140), I appreciate this opportunity to discuss the role of green jobs skills training for workers in the larger context of empowering our workforce to rebuild America's economy and promoting long-term competitiveness.

It is no secret that our economy is struggling. Real GDP declined at a 6.3 percent annual rate in the fourth quarter of 2008 and corporate profits fell at a 51 percent annual rate, the largest decline since 1953. Manufacturing employment is at an over 50-year low and businesses are having difficulty borrowing and meeting their payrolls.

Earlier this month, the Bureau of Labor Statistics (BLS) reported that the national unemployment rate reached 8.5 percent—the highest in 26 years. In many areas the situation is even more severe. In March, the unemployment rate was 11.2 percent in California, 11.4 percent in South Carolina, and 12.6 percent in Michigan. The rates of joblessness among minorities are even higher. Latinos are unemployed at a rate of 11.4 percent and African-Americans are unemployed at a rate of 13.3 percent. Teens are unemployed at a rate of 21.7 percent. People with disabilities also are facing considerable challenges to securing employment. According to the BLS Current Population Survey's new monthly data series on the employment status of people with disabilities, the unemployment rate for this population is 13.1 percent (not seasonably adjusted) and their labor participation rate is 22.8 percent compared with 70.9 percent for persons without disabilities.

Our Nation has lost 5.1 million jobs since the recession began in December 2007. The number of long-term unemployed (those jobless for 27 weeks or more) rose to 3.2 million over the month of March and has increased by about 1.9 million since the start of the recession. Investing in our Nation's workforce and creating a positive environment for new jobs is a critical component of our efforts to restart our economy.

Green jobs play an important role in our economic recovery. The promise of green jobs is not only to help re-start the economy and put Americans back to work, but also to help make America more energy independent. Investment in our Nation's clean energy future will not only secure America's energy supply, but will do so in ways that promote economic stability and the advancement of all our communities.

For instance, many green jobs are in the construction trades, and these jobs tend to pay above average wages. The May 2007 Occupational Employment and Wage Estimates published by BLS indicate that construction and extraction occupations pay a median hourly rate of $17.57 as opposed to $15.10 for all occupations. Therefore, we can expect that many green jobs will pay 10 percent to 20 percent better than other jobs. In addition, data from the Current Population Survey published by BLS indicate that 21 percent of construction and extraction workers were represented by a union in 2008, which suggests that many green jobs will be unionized. These are jobs that will provide economic security for our middle-class families while reducing our Nation's dependence on imported energy. These are also jobs that traditionally cannot be outsourced. Small businesses will play an important role in hiring skilled workers to grow the green economy.

The American Recovery and Reinvestment Act of 2009 (Recovery Act), signed by President Obama on February 17, 2009, is the most significant single investment our Nation has ever made to ensure our future economic success. The Recovery Act will enable the repair and improvement of the country's infrastructure, fund innovative research and development initiatives, create job opportunities for Americans, and propel the growth of green jobs. The Recovery Act also contains funding for training, a significant portion of which will be used for training in sectors and industries identified as high growth, including green jobs. This training will improve workers' employment opportunities in occupations that pay good wages.

Across the Federal Government, billions of dollars have already been distributed to the States for investments in infrastructure and research and development that will create opportunities for green job growth. For its part, the Department of Labor's Employment and Training Administration (ETA) has already made available $3.47 billion in Recovery Act funds to support workforce investment activities. Such activities include retraining dislocated workers, summer employment for youth, and community service employment for low-income seniors.

The Department of Labor is developing plans for use of the $500 million provided in the Recovery Act for research, labor exchange and job training projects that prepare workers for careers in energy efficiency and renewable energy industries, and will soon issue solicitations for grant applications to be administered by ETA. These grants will provide an infusion of workforce training funding that will help ensure there is a qualified American workforce ready to meet the needs of our country's expanding green industries. Department of Labor personnel are developing guidance for solicitations, which will include requirements for community engagement, the formation of strong local and regional partnerships, as well as the identified leveraging of additional funds. The Departmental review criteria will ensure that the grants are awarded to those applicants who are most responsive to these requirements for collaboration, with the objective of effectively targeting the communities most in need through our "green training" investments.

The unemployment data show that particular segments of the population—young people, people with disabilities, African-Americans, and Hispanics—are facing unemployment rates in the double digits. Green jobs provide an opportunity to rebuild our communities in a more equitable manner which is inclusive of all Americans regardless of socio-economic background. In order to realize this opportunity, the Department will include features to prioritize access and inclusion in these training programs for low-income workers, unemployed youth and adults, high school dropouts, or other underserved sectors of the workforce within areas of high poverty. These represent some of the communities hardest hit by this recession, and they too will have an opportunity to benefit from green jobs in our economic recovery. We hope to have the first round of solicitations available in June 2009.

We can also promote green jobs across all workforce investment programs. The Department of Labor has already begun some of these efforts. The Department recently issued guidance to States to help implement the formula-funded job training provisions of the Recovery Act, noting that the energy efficiency and renewable energy industries offer workers new opportunities that may require additional training and certification. Through the Recovery Act, a number of other Federal programs will receive large investments in programs and projects that could create green jobs. These initiatives include investments in renewable energy infrastructure, energy-efficiency home retrofitting, biofuel development, and advanced drive train/vehicle development and manufacturing. As States receive Recovery Act funding and implement training and reemployment strategies, the Department encourages States to recognize opportunities to prepare workers for green jobs related to these other sources of Federal funding.

The Department has also encouraged States to expand existing training programs, such as registered apprenticeship programs that have the potential to prepare workers for careers in the renewable energy sectors and for other green jobs. The Department's guidance has encouraged States to identify regional and local environmental resources, businesses, and pre-apprenticeship programs promoting green jobs and projects to provide youth summer work experiences that prepare them to compete in a "green" economy. With green jobs workforce training, we will ensure that America's workers have the needed experience and expertise to succeed in the green economy.

We are working throughout the Department of Labor to leverage resources responsibly within existing government programs to promote green jobs. Some examples of action include:

• The Office of Apprenticeship within the Employment and Training Administration announced funding on February 17, 2009, to support 10–20 grants to fund the

development and/or adaptation of national guideline standards for apprenticeships. I am pleased that this SGA also highlighted green jobs as an eligible activity.

• The Veterans' Employment and Training Service (VETS), whose mission it is to provide veterans and transitioning service members with the resources and services needed to maximize their employment opportunities, will soon release an SGA, which will highlight green jobs for the purposes of training and employment.

• BLS is currently developing approaches to measure green jobs, including surveying workplaces in industries where green activity is expected to occur to identify both the extent to which they are performing green activities and the occupations of the employees who are doing such work. Occupational research specialists within ETA have also begun to define green jobs, review current green investments, and understand how new green technology materials will affect occupational requirements.

• Future construction and repair of Job Corps facilities will incorporate green technologies. Job Corps will also develop and implement green jobs training into the curricula at all Centers, beginning with automotive maintenance, construction, and manufacturing.

Furthermore, I am very interested in "greening" the Department of Labor's workforce system to ensure that the system and its partners are fully connected and fully committed to sustaining the green economy in both current jobs and emerging occupations. Some of our initial ideas include promoting green jobs through technical assistance, greening the State and local workforce investment system, registered apprenticeship, YouthBuild, Job Corps, opportunities for veterans and people with disabilities, and more. Community organizations, both secular and faith-based, can be important partners in our efforts, as well as labor-management partnerships, employers, community colleges, and post-secondary education institutions. Activities coordinated with these partners could include approaches such as on-the-job and classroom skill training, alternative delivery methods (such as evening and weekend programs as well as computer-based training), and customized industry training which leads to recognized vocational and industry certificates or credentials.

Our green jobs workforce training efforts will be even more effective in aiding our global economic recovery if we work together with our partners within the U.S. Government and around the world. Two weeks ago, I participated in the meeting of the G8 Labor Ministers, which focused on the human perspective of the economic crisis. In each plenary session I attended and in each of my bilateral meetings, my fellow labor ministers raised the topic of green jobs. Some of them are further ahead in terms of their economic transitions, others are not. Two things became clear from these conversations. First, we must work globally to address this economic crisis. Second, green jobs are an important component of our global economic recovery and the world is looking to the United States for leadership. The message I delivered was well received—as a newly confirmed Secretary of Labor I was there to listen, learn, and help lead to bring about the change we need. This includes working locally and globally to advance a green economy.

My colleagues in the Cabinet and I recognize that our investments cannot be made in a vacuum. The Department of Labor and other Federal agencies have already begun to coordinate our work to strategically implement programs that ensure cooperative interactions between investments in infrastructure and research and development on one side and job training and worker placement on the other. My staff, along with others throughout the Federal Government, is meeting regularly to discuss green jobs issues and identify ways in which we can partner to leverage resources and avoid duplication. I am pleased to provide you with a few examples of such discussions and partnerships:

• In February, Vice President Biden's Middle Class Task Force, of which I am a proud member, traveled to Philadelphia to focus on green jobs as a central part of our economic recovery. This event and the work of the task force have helped facilitate ongoing discussions between DOL and other Federal agencies, which are detailed below.

• In March, I traveled to the Community College of Allegheny County in Pennsylvania with Secretary of Energy Chu for the announcement of a major new investment to create green jobs. Secretary Chu's staff and mine are speaking regularly to leverage investments in weatherization and ensure that workers hired for new jobs in weatherization receive proper training—it is imperative that these jobs be good jobs.

• My staff is meeting regularly with staff of Secretary of Housing and Urban Development Donovan with the goal of creating a memorandum of understanding that will allow our Departments to encourage and more easily facilitate partnerships between public housing administrators and Workforce Investment Boards. It is our

hope that such a partnership could not only encourage the greening of public housing but also promote the training and hiring of unemployed residents of such housing.

• During a visit to job training sites for youth and veterans in Sacramento and San Francisco, I visited the San Francisco regional office, which is located in the greenest Federal building in the Nation. I know it will be important for us to lead by example and have begun initial communication with GSA to help green our Federal buildings.

I am interested in working closely with Secretary of Veterans Affairs Shinseki to facilitate the entrance of veterans into green jobs as part of their transition into the civilian workforce. Secretary Shinseki and his staff can be helpful in identifying the Department of Labor as an important resource for employment services for veterans and transitioning service members. Secretary Shinseki can also focus the VA's Vocational Rehabilitation and Employment Service on training opportunities for disabled veterans pursuing a program of rehabilitation. In addition, I will work closely with Secretary of Education Duncan to discuss the role that adult education system and community colleges can play in vocational rehabilitation and the training of our workforce.

I am eager to begin partnering outside of the Federal Government to ensure that communities suffering in the recession benefit from green jobs training. Just last week, the Institute for Women's Policy Research and Wider Opportunities for Women met with the staff of the Women's Bureau to discuss opportunities for women in green jobs. I am pleased to be holding a round table on the issue of women in green jobs on Earth Day and am excited to work closely with those in both the public and private sector to ensure that our efforts complement the productive work that I know many in both sectors are advancing.

There could be future linkages between green jobs and the recovery of communities hit hard by layoffs. Workers can be retrained and re-equipped to contribute to the growing of the green economy. One example is in the U.S. automotive industry. The Department of Labor is playing a vital role in supporting the economic recovery of communities that depend on car manufacturers and related industries. Many of these communities are passionate about green jobs being a part of their future economic success, and the Department of Labor will work with these communities to ensure they not only survive but thrive in our country's recovery.

I am also eager for staff to meet with key apprenticeship stakeholders and other business leaders to discuss the impact of an emerging green economy on registered apprenticeship. I appreciate that employers and manufacturers in these sectors have much to offer as do members of this committee in this regard.

At our recent Middle Class Task Force meeting in Philadelphia, Vice President Biden stated that "we'll measure our success, whether it's 4 years or 8 years, by one thing: If we can raise the standard of living for middle-class people." We cannot ignore the disconnect that persisted between economic growth and middle-class incomes even when the economy was strong. I am committed to ensuring that both diversity and inclusion are reflected in the Federal funding of green jobs workforce training.

While we deal in facts, figures, and charts, we must remember that behind the "numbers" of the economic downturn and the economic recovery are human faces, people, facing challenges unlike what many have faced in our lifetime. I believe that green jobs, if implemented correctly, can be an opportunity for the Nation to regain economic security. I thank you for your time and look forward to our dialogue on this matter.

Senator MURRAY. Thank you very much, Secretary Solis. We appreciate all of your comments.

The concept of green jobs is really popular, we hear it all of the time, but many of our workforce practitioners find it really confusing, and they're not exactly sure what a green job really is.

While they understand how to help individuals get the training they need, they may not understand the science or the signs, or the politics or the policy behind the green movement. I wanted to ask you what kind of technical assistance is the Department of Labor going to provide to the staff of our workforce boards and our one-stop centers and training providers, to help them better serve workers in this green economy with their WIA formula funding?

Secretary SOLIS. Madam Chair, that's a great question. What we have already begun to do, as I said in my testimony, is that while we were providing Recovery Act money, formula funding to the different States, we had already provided outlines and guidance to the different States that are recipients of these funds, to look at how they can integrate green jobs, and that is, partnering with different organizations that maybe, perhaps, were not included in the past. That is, something that we're going to have to work on, making sure that, for example, we have business at the table, that we have apprenticeship programs at the table, that we have different industries—small businesses that might be interested in beginning a whole new capital outlay program to begin to manufacture solar panels, or to work and partner with vocational education schools.

I just want to give you, if I could, a brief example of what I have already seen happening, that is taking place across the country. In one school district, L.A. Unified, they have an adult program—most of their money comes through the Federal Government and the State government, but they have partnered with the IBEW, an apprenticeship program, but also partnered with an outside business organization.

There's a need for people to be trained, to provide for the installation, but also the manufacturing of solar panels. These two partners came together, they were able to leverage school district money, private funding and also the assistance and technical help from the IBEW, who has a curriculum in place already. The instructor was paid, through, however, the small business.

In fact, this compilation of coming together in that manner and being able to train and help motivate people who—maybe for the first time—may be exposed to a new career opportunity, I think, is really, really important to underscore.

It isn't just people that are safe, for example, in the electrical industry, or plumbers, or construction folks, but it can also be individuals who will have—for the first time—be exposed to a different career path that may provide them more sustainability in years out.

That's the beauty of being able to work within the system of WIA, to make sure that we not only support the workers—the workers are very important to make sure their skills training is available—but that businesses also have an opportunity to expand.

One of the points I'd like to make is that in the WIA program itself—and as we talk about reauthorizing the legislation, I think it's very important to make sure that we include in the WIA the one-stop efforts—all opportunities that we can through Department of Commerce, or the Small Business Administration to help couple those dollars that are going to need to be drawn down and leveraged, so these small businesses and medium-sized businesses can have the capital, thus being able to then hire individuals and begin the production of whatever it might be—wind power, solar power, biofuels, or what have you.

That's kind of my thought process and how we're going to go about determining how we begin this process.

Senator MURRAY. All right, and that's WIA. What about the grant recipients of the competitive grant program under the Economic Recovery Act?

Secretary SOLIS. I am making it very clear to our regional offices across the country that we will be in a position to provide technical assistance to different organizations that want to come into contact with our office.

I think we're taking a very proactive approach, and also touching base with those existing programs that are already partners of the WIA program, but in fact having to actually go even farther.

Because as I said earlier, there are a lot of other stakeholders that haven't been at the table, and we want to do a good due diligence to make sure that we attract as many of those groups—whether they're veterans, whether they're disabled, whether they are individuals who have been dislocated for 2 years or more, we want to make sure that our outreach is as inclusive and as comprehensive as possible. There will be times and opportunities to have conferences, partnering with other private sector groups to make sure that the WIA and the one-stops are all giving the same information out—and in different languages.

Senator MURRAY. OK, now are you reaching out specifically to businesses, to help them understand the green jobs and help them with the skilled workforce there?

Secretary SOLIS. We do have funding available to provide technical assistance, so I plan on making that a big part of our agenda.

Senator MURRAY. OK, thank you.

Senator Casey.

Senator CASEY. Thank you, Senator Murray.

Madam Secretary, I want to thank you, again, for your leadership on these issues.

One of the things that Senator Murray started with was the definitions. No. 1, I think there's a lot of language that we're using in the discourse in Washington, and across the country.

I was provided with one basic definition of green jobs, and I want to make sure that we're on the same page. Here's what this definition says: Green jobs provide, "products and services that promote renewable energy sources," that's one, "reduce pollution, conserve energy and natural resources in any industry." Is that kind of a generally good definition of what we're talking about?

Secretary SOLIS. Senator, yes it is. It's very broad, and it was done deliberately, because we are, in fact, going to be researching the different components that can be a part of this, so you could conceivably have a job retrofitting a house, a construction worker, but because now they're using not just equipment, but they're placing products that are going to save energy costs, in the electricity bill, or any kind of power that is used in that household, those jobs will require a different set of training skills, and obviously would be as part of the check-off list in terms of the box that says, "Yes, this is an applicable field that could be considered green."

Senator CASEY. I was glad that, in your testimony, you cited, as we've seen before, but it bears repeating, that the hourly rate differential is that green jobs pay 10 to 20 percent higher—very important. I think, unless people have a sense of the economic benefit of this, it might not sound as compelling. I'm glad you have pointed that out.

One thing I wanted to do from a very broad perspective, is the Recovery Bill, and the enormous benefits across the board, especially with regard to this topic, green jobs.

As you look at the next year or two of the Administration, obviously the Recovery Bill is a major part of the strategy of not just getting the economy to recover, but also to put in place strategies for the longer term—when you review, or when you highlight the Recovery Bill, the budget and any other strategy—how do you see that playing out as a strategy? In other words, what are the basic building blocks for a green jobs strategy in terms of what the Administration hopes to do?

Secretary SOLIS. Well, Senator, I can talk about my Agency, and what our intention will be, and Senator Murray knows this very well, that we haven't reauthorized the WIA program——

Senator CASEY. Right.

Secretary SOLIS [continuing]. In several years. That will be one of our most important structural changes that can be made to help sustain this growth in the job economy and green jobs.

I definitely see our working with this committee in helping to make those structural changes so that they're permanent, and that people from the get-go know that these are the things that we're going to be looking at, in terms of providing assistance from the Federal Government.

We don't want jobs that don't go anywhere. We want jobs to have a career path. I think that's very important. At any one point in time, someone could come in from, maybe just a GED background, but you never know, may eventually go up to a community college and, who knows, may become their own small business owner, and may require additional assistance.

We want to have a seamless system that allows people to come in and out, as necessary. Not everyone is going to want to spend, maybe, 4 years in a program. Some may not have that luxury, and I think we need to be responsive and flexible to that.

I intend on working as best I can, with our formula funding, and the WIA money, as well, to help provide the structural incentives and guidance to the States, so that they know that next time around, after this money is gone from the recovery package, that we're still going to continue on with this agenda.

Senator CASEY. Well, we look forward to working with you on the changes that we need to make to the Workforce Investment Act and it's going to have a tremendous impact on our State.

I may leave this for the second round, but I wanted to ask you about weatherization, and the strategy that the Recovery Act, as well as other programs, are putting in place for that, but maybe I'll—I've got about 10 seconds left, we'll wait until the next round. If we can highlight that a little later, that would be helpful for the perspective in our State of Pennsylvania.

Thank you.

Secretary SOLIS. Thank you.

Senator MURRAY. Thank you. We'll make sure we have a chance to get back to you on that, Senator Casey.

Senator Hagan.

Senator HAGAN. Thank you, Madam Chairman.

This question might address some of those issues, too, but Secretary Solis, I want to talk about how we can make sure that community colleges are playing a key role in preparing workers for these new green jobs. In my State, North Carolina, we have 58 community colleges across the State and they're all integrated in their communities. These institutions have been so beneficial for so many people, who are getting retrained for different jobs within the workforce. I think you'd agree that we want to continue to bolster these existing institutions.

My concern is that new technologies and new jobs are being created at such a fast pace that we might end up facing a shortage of instructors who are qualified to teach these skills. I'd like to ensure that all of our community colleges are equipped to teach the new skills in electricity and manufacturing, heating and cooling, automotive, agriculture, construction, and the other green industry jobs that will be tied to this area. My questions are, how can we best ensure that we're offering the training for such a diverse group of industries and that training for these programs is available in as many areas as possible, and that the skills taught are the most applicable, and then the most up-to-date skills.

The other part of that is, what other obstacles do you think community colleges might face, and how can we overcome those obstacles?

Secretary SOLIS. Thank you, Senator Hagan. Very good question.

Community colleges play a very, very significant role in the WIA program now, and they will continue to have, I believe, a major role as we roll out the green jobs programs and the funding for that. We've had several conversations already with many providers, some of whom are from the community colleges, and many, I think, are in a better position than most of the other educational institutions to be able to rapidly respond to changes in curriculum that might be needed.

There also is, I think, an effort to try to get individuals from business organizations who can actually come on campus and provide the instruction that's needed—that will also cause some reforms that community colleges will have to make, because typically some classes aren't always offered late evening, or Saturdays and Sundays. Keep in mind, there are different dynamics that are going on and we have to have our educational systems that want to be a part of this to be as flexible as possible.

That might be something down the road that has to be looked at. I truly believe that there will be opportunities for community colleges along with other partners in the community to be able to really reach out and bring, not just exclusively to dislocated workers, but people who have traditionally not even thought about, maybe, upgrading their skills.

I'm thinking, also, about our returning young vets that, for the most part, could really benefit from a community college experience. It might require them to get into, say, a green job program that might be short term, but in the end, they may be exposed to some other subject matter there, and they end up taking on more course work.

I could see so many advantages occurring for the community colleges. I know they're overwhelmed right now, there have been a lot

of layoffs throughout our different States, in the State of California, we're faced with the same problem, but I think it's going to require the community colleges to really figure out that maybe they have to also prioritize where it is they want to be most effective.

I know their goal, overall, as a former trustee for a college, you try to meet all of the community needs. Well, in this day and age when we have limited dollars, they're going to have to work very closely in partnership with other stakeholders to really focus and maybe share what group can do a better job in training, what group might do a better job in casework, case management, so to speak.

There may even be a need to collaborate with local HeadStart programs, to allow for women, for example, to take the courses, and have a place to send their children during the time that they're being instructed, or are getting their education.

It's going to create a synergy, a collaboration, and we are trying our best, through the Department of Labor to make sure that we get that information out, that those are the kinds of things that we want to look for that I, certainly, would want to rate very high. When it comes to regional programs, we know that your State and others in Oregon are faced with just tremendous hardships right now.

We're also thinking about, maybe, changing the way we deal with, for example, trade adjustment assistance moneys, and that's a discussion we can have later on, but how we can expand that to provide assistance for people who have been dislocated, and it's now affecting an entire region.

Senator HAGAN. Thank you, I think the key is to be sure we have the qualified people doing the training and the instructing of these new jobs, and be sure that there are funds available to hire these instructors and to train them, too.

Thank you, Madam Chairman.

Secretary SOLIS. Thank you.

Senator MURRAY. Thank you.

Senator Merkley.

Senator MERKLEY. Thank you, Madam Chair, and thank you, Secretary, for your testimony.

The framework for these jobs, as you noted, is to produce clean energy, to change the energy formula in terms of our dependence on foreign oil. Do you have any sense of what kind of impact we make on our energy dependence over the next 10 years, if we continue this level of effort?

Secretary SOLIS. I don't have any accurate data to share with you, I mean, that's—what I will tell you is that, in terms of the Department of Labor, what we see happening in our priorities is to put people to work. I do believe there will be an opportunity to do that.

In doing that, in these particular occupations, there will be an end result. Hopefully our end result will be that we will lower our carbon footprint, that we will create opportunities to have electric vehicles or different types of fuels that will provide the necessary input so that we can have more efficient automobiles or transportation modes, that I think all of us in the long run will benefit

from. That's anecdotal, but that's the direction, I think, that we are going to be moving in.

We're really also looking at having our communities take more ownership in their households. If we retrofit homes—whether it's public housing, or whether it's just average Joe or Mary, I believe in the long run they will also reduce their carbon dependence, and we'll bring down the cost of electricity, we'll be able to show that there are conservation methods and techniques that can be taught and learned that will help our households, that will help our schools, that will help, I think, our entire—possibly even Federal Government—but that's down the line.

Senator MERKLEY. Well, one of the things that I'm very interested in over the course of this year and the years to come, is an intense discussion over creating a framework. A framework into which our effort in green jobs exists, so that we have a vision of energy independence, we have a vision of the type of reductions in our footprint that you referred, and, that we have a goal for our production of renewable energy. I'm certainly hopeful we can reach the 25 percent by 2025, but that we can incorporate these into a national plan, a national framework, so we'll kind of have a path that we can judge our success by, and sustain citizen support for our investment in green jobs.

I know it's a broad discussion that involves many departments of the Government, and certainly in dialogue with the Hill, here, but I certainly look forward to that conversation between this committee, the Energy Committee, the Environment Committee, and the various departments.

You have noted the role of community colleges, and the fact that many of these jobs are construction jobs that will produce higher wages. I also appreciated your reference to the fact that the Department will include features, prioritize access inclusion for low-income workers, unemployed youth and adults, high school dropouts, and underserved sectors of the workforce.

I know I have gotten some feedback from some of the more challenged communities in my State, of saying, is this movement going to bypass them. Would you like to expand on some of those features, and how you hope to address and connect them?

Secretary SOLIS. Yes, thank you, Senator.

As I mentioned earlier, our attempt now, even in putting our solicitation letters out for grants is including language where, for example, in the Youth Build Programs, we're asking for those individuals who would like to compete for those grants to include components of green job training. That is, in my opinion, a must.

Also, with the Job Corp Programs where, as you know, those are residential programs and you have typically at-risk students that participate in those programs, we're also looking to provide guidance so that any reconstruction of those facilities—because that's ongoing, all the time—is that there is a component available to allow for training of those Job Corps recipients, but also curricula, because they're also a provision for Job Corps, where they have to get some type of instruction—that is something that we also want to make clear, that that has to be a part of the initial grant.

We're doing what we can. I'm very excited that the summer youth program, in fact, also has received some guidance that—we

are not mincing words, here, we want to be very clear that we want to have partnerships established right now, ready to go—and I think some of them are ready. Certainly in parts of Los Angeles that I'm familiar with, to see that these young people in summer youth employment programs also have an opportunity to be exposed, and get some skills in the green industry.

Senator MERKLEY. Thank you very much.

Senator MURRAY. Senator Sanders.

Senator SANDERS. Thank you, Madam Chairman.

Madam Secretary, thank you for being here, and it sounds like you're hitting the ground running, which is what we need. I think you and I agree that we are on the cusp of a revolution in energy in this country, that we have the potential to create millions of good-paying jobs in energy efficiency, making our homes, our offices, our factories more energy efficient, and also moving forward in sustainable energy.

Let me just ask you a couple of questions, if I can, with the $500 million made available through the Economic Recovery package for green jobs training, will you and your staff at the Department of Labor use the Green Jobs Act criteria as guidance for distribution of those funds, including the requirements that grantees include equal participation from industry and labor organizations?

Secretary SOLIS. Senator Sanders, I think you and I can agree that we spent numerous hours, numerous time and months on getting legislation for green jobs finally enacted, now we have an opportunity to see it implemented, and yes—most of what you've asked—we are trying to make sure that all of that is included in our implementation through the Department of Labor.

Senator SANDERS. OK, we think that labor organizations who have a lot of skill at this—I know the IBEW, many other organizations have hands-on—have a history of working with young people in teaching them the skills that they will require, and we just like to see them involved in the process. Does that make sense to you?

Secretary SOLIS. Absolutely. I spoke earlier about an experience that I shared with the panel, here, regarding the East L.A. Skill Center in California, that has partnered with IBEW, with the school district, and with the private entrepreneur. They, collectively, have come together and agreed to train, provide the curricula, the skills, and the jobs——

Senator SANDERS. Good.

Secretary SOLIS [continuing]. That are going to——

Senator SANDERS. That's exactly the kind of cooperation I think makes sense.

My other question is, will the recovery funds also provide for the pathways out of poverty program, or a similar effort to fund community partnerships, as authorized under the Green Jobs Act?

Secretary SOLIS. I am currently working with my staff, the employment training staff, and keep in mind, I don't have all of my assistant secretaries in place, so we're having to really push hard, our career staff and others, and bring in other technicians to help us put together the guidelines, so that we are as inclusive as possible.

From the get-go, we do everything we can to make sure that all of our stakeholders have a fair chance at getting involved, and that

is almost—I want to say—almost a must on my part, because I truly believe that that's what our President envisioned in green jobs—that everyone could partake and be a stakeholder, and yes, have access at any point to enter in for these jobs.

Senator SANDERS. It seems to me that the Department of Labor has an enormously important role to play in this energy transformation. Because what I can see in Vermont, and I suspect all over this country, is that right now if you wanted to get your house refurbished to make it more energy efficient—you know what—you will have a hard time finding skilled workers that you need. If you want to install solar panels, if you want to have a wind turbine maintained, if you want to do geothermal—we don't have the workers there. Are you working closely with other agencies to make sure that we are training the personnel—you can have all of the great technology out there, if we don't have people that know how to install it or maintain it, we're not going to make much progress—are you working with other agencies on this?

Secretary SOLIS. Yes, and Senator, I would be remiss if I didn't mention that the Department of Education will also play a tremendous role in training our instructors, but also providing the support that's going to be necessary to provide incentive, so that educational institutions understand that we want them to be active participants—whether it's the community college system, or even the vocational and adult education programs, as well. Because everyone has a stake in this.

I heard yesterday from a group of the California School Board's Association that were very interested in even having, what they call, the ROP programs involved in these aspects, as well, because they can provide delivery right away.

We want to make sure, though, that certification and standards are high——

Senator SANDERS. Right.

Secretary SOLIS [continuing]. That there is a good degree—and we can account for that—of training that's provided.

We want to be able to go back and audit and make sure that we are on target, and that we also make sure that we are looking at long-term occupations that will be available.

As we speak now, I may not have all of that at my hand, but we certainly are having my staff instructor to help us get there.

Senator SANDERS. Well, as chair of the Green Jobs Committee in EPW, we look forward to working with you. There's just unbelievable potential out there for the creation of green jobs, for protecting our planet, and you're going to be playing a very important role in that. We look forward to working with you.

Thank you very much.

Secretary SOLIS. Thank you, congratulations.

Senator SANDERS. Thank you, Madam Chair.

Senator MURRAY. Thank you very much.

We will now have a second round of questions for anybody who would like to do that before we turn to our second panel.

I just have a few questions, Madam Secretary. I wanted to ask you about the competitive grants under the Economic Recovery Plan, and how the Department is going to measure the effective-

ness of those grant projects, so that we know that they're really working.

Secretary SOLIS. Madam Chair, I know that this is of great concern to many members of the Senate and the House, because in the previous Administration, there may not have been enough accountability. What I intend to do is to make sure that we have measurement tools available so that we can monitor, but also provide, if necessary, any technical assistance and make sure that we are on focus with any of these Recovery Program moneys that are going out there now.

So, yes, we will be very open to a more robust auditing, and also a monitoring of these various funds, and that——

Senator MURRAY. Are you writing measurements now, so that everybody knows what they have to achieve with these?

Secretary SOLIS. Those guidelines are being worked on as we speak, and will be issued, for the most part, for green jobs, by June.

Senator MURRAY. By June? OK. How is the Department going to share information about what does work and what doesn't, once you get that information back?

Secretary SOLIS. Everything will be posted through the Department of Labor on dol.gov.recovery. That information will be transparent, in addition—as you know, President Barack Obama also has a Web site available to show where all Federal stimulus moneys are going.

Senator MURRAY. OK, and you are going to be working with other Secretaries, I assume. You mentioned HUD, you were working with HUD and the Department of Education and other agencies, because this does cross a lot of——

Secretary SOLIS. Department of Energy, yes, in fact, Secretary Chu and I visited Allegheny College not too long ago, and we're touring the community college there to look at potential opportunities where we could provide incentives for funding. I know he will have a big role, here, he has a larger pot of money than I do, in terms of providing the kind of research funding, startup money, to get these businesses going, and get that expertise in the field.

Senator MURRAY. OK, thank you very much.

Senator Casey.

Senator CASEY. Thank you, Senator Murray, and thank you, Madam Secretary.

Two questions, first—getting back to the question of weatherization—we have, in Pennsylvania, basically the second-oldest State by population, a little more than 15.5 percent of our population over 65. A lot of those individuals who happen to be older citizens are living in very old homes, in many cases. Many of them deceived into hiring people who were corrupt—because they wanted to hire them to do home repairs, for example, they would enter into agreements which would be bad for them, and which are based upon false and misleading assertions by those people.

I know the Recovery Bill provides funding for weatherization which, as you know, does so much on efficiency, it does create jobs. Can you talk to us a little bit about how that's being deployed and implemented? I guess it's not only—it involves a couple of agencies other than yours——

Secretary SOLIS. Right.

Senator CASEY [continuing]. HUD, as well. Can you talk to us a little bit about how that's going, and the benefits of it?

Secretary SOLIS. There's been a lot of discussion and a very ambitious plan to provide weatherization for, I believe, a million—that's the goal—a million homes. It is, I think, primarily based out of the Department of Housing and Urban Development.

Senator CASEY. Right.

Secretary SOLIS. We are working with the Secretary on that, to think about how we can improve the job training aspects, so that we really do set up some standards, so that isn't just a short-term job, after the funds run out, that somehow these people will not have a job after that.

We do want to create bridges, so we can expose them to other types of occupations, as well, that would call upon those same skill sets. That's something that I envision doing.

With respect to individuals that have been abused by unscrupulous small businesses, we are looking at, also, through the Department of Labor—really looking at, because of our Office of Contract Compliance—overseeing who those grants go to, what kinds of entities that are attached to that, and also trying to make sure that our wage and hour, for example, programs have more assistance, so that they can go out and actually look at these sites, to see that our labor laws and that people are being treated fairly, that they're being paid their wages, and that nobody is, hopefully, being taking advantage of.

Senator CASEY. Second, with regard to part of your testimony, we have a significant problem with returning service members, the veterans who were working in a particular job when they left to serve their country and they're coming back and not getting those jobs. In many cases, because of an action that's illegal, and unfortunately, some of the illegal actors are governments, at various levels. That's a discussion for another day.

I'm glad that on page 3 of your testimony, you talk about the Veterans Employment and Training Service, the so-called VETS. VETS mission is to provide veterans and transitioning service members resources and services needed to maximize their employment opportunities. Can you talk to us a little bit about your efforts there?

Secretary SOLIS. Part of our jurisdiction requires that we also go after employers that we find have refused to take back the employment of, say, a returning service man or woman. Keep in mind that we have a very scaled-down program, as a result of the last 8 years. We're hoping to increase that and become a more vigorous proponent for veterans, whether it's helping to provide them with training, hooking them up, so to speak, with small businesses for opportunities—even those that are disabled. That is going to be a big vision that I, personally, have interest in because of the area that I come from in Los Angeles, we have such a high rate of veterans.

We're going to see many coming back with disabilities, so we're going to also have to reach out to our employer community to see how we can make sure that there is a bridge, so that there is job placement opportunities, but also within Federal Government—we

also have an obligation to hire these returning veterans—men and women.

There are good programs that have started, I know, across the country—Helmets to Hard Hats, where some of the union apprenticeship programs have gone out of their way to really integrate and bring our veterans into these programs—young veterans—that might be interested in the construction trades, or electrician, or carpentry or whatever it might be. Those are opportunities that we want to continue to support. And then hopefully, have a component—an education component—that will help provide them an additional set of skills, then they might be able to move up the ladder, because so many of these veterans are so young that are coming back.

Senator CASEY. Thank you, Madam Secretary.

Secretary SOLIS. Thank you.

Senator MURRAY. Senator Hagan.

Senator HAGAN. Thank you, Madam Chairman.

Secretary Solis, North Carolina has a rich tradition in agriculture and forestry, and in fact, agricultural production accounts for about 52 percent of our Gross Domestic Product in North Carolina. And as, I'm sure, you're aware, this industry creates massive amounts of biowaste when cultivating crops and livestock.

Some of the companies in my State have worked with landowners, and farmers, to use the biowaste and the biomass to create green energy. These companies are now capitalizing on an idea that farmers can play a significant role in helping to create more renewable energy. And I certainly agree. I've toured some of these farms, and it's remarkable what they're doing.

How can we continue to cultivate this tradition, and work with farmers, foresters, and other landowners, and will the money appropriated by the stimulus package be used to provide job training to workers and the agricultural and forestry industries?

Secretary SOLIS. Thank you for that question.

Yesterday, I had the opportunity to attend my first Cabinet meeting with the President and other members of the cabinet, and this very discussion came up, about how we can kind of work interagency, because there's a need in agriculture, and also in the Department of Interior, in forestry, where there is that skill component—education and skill training that needs to be coordinated better.

There's talk of possibly even creating a position where we can look at how we can better coordinate all of these opportunities.

There is a need to do this, and I know that the other Cabinet members are very interested, so I think we will be working out, through our discussions, and through, also, the Middle Class Task Force, quite frankly, as to how we can kind of integrate—not overlap, not duplicate—but to make sure that each agency has that opportunity. Because we do need people in forestry, we do need people in agriculture and small farmers to be a part of this—there has to be loan programs made available, some R&D, as well, that can help those farmers become a mainstay in the green job economy.

Senator HAGAN. Do you think that the Department of Labor budget requests will include green training programs for agricul-

tural workers, and is there any idea what those programs might look like?

Secretary SOLIS. I couldn't tell you, off-hand. I think that's a discussion you may want to have with the Cabinet Secretary, Department of Ag, and also of the Interior.

Senator HAGAN. OK.

Secretary SOLIS. Yes.

Senator HAGAN. Alright.

I have another question concerning the diverse workforce. In North Carolina, we have a rapidly growing and diversifying workforce. The Census Bureau estimated that we will increase our workforce by more than 50 percent over the next 20 years.

In your written testimony, you mentioned that unemployment rates for minorities are higher than average. Once again, in North Carolina in 2008, the employment rate among African-Americans was about 50 percent higher than Caucasian unemployment rate. You also discussed efforts to ensure that investments in green jobs will benefit women and minorities. Can you provide any further detail on how you think we can improve the opportunities for women and minorities in the green job sector?

Secretary SOLIS. I think, from the get-go, when we put out our grant solicitation we have to be very clear, what it is we're looking for. Of course, as a component through the green jobs, there is a pathway out of poverty. That, I believe, will help capture at least a good segment of the population that we know has been, traditionally, left out.

We also want to make sure that there are opportunities, and this is where I think the Senate and the Congress can be helpful, through your own networks, to make sure that folks that you know that would like to get involved in these proposals, or in the grants programs, contact our regional offices. I think that can also be helpful.

I think there's so much that we can all do together, and then making sure that our one-stops have, at every point, an opportunity—information that's available—that they are going out into the community, not just waiting for people to come in, because typically you will miss a lot of folks, unless you're out in the community.

We're looking at this arrangement in a very proactive manner.

Senator HAGAN. Do you have any idea on how much you can—you think you can actually reduce the unemployment in the country with this green energy jobs?

Secretary SOLIS. We're hoping that there may be, potentially, 3.5 million jobs either created or that are kept. As you know, right now, as I said earlier, we have lost, already, 5 million—we have 5 million unemployed people.

We have a ways to go, and I think that it's going to be a bit of time to be taken to make sure that we have these programs in place for the retraining. We do have a shortage of—not enough skilled individuals to go into these jobs where I think if we had done more of that homework before, we wouldn't be in such a bad position that we are now, where we have to work really hard to get people trained, and in a rapid manner.

Senator HAGAN. Thank you.

Senator MURRAY. Thank you.

Senator Merkley.

Senator MERKLEY. Thank you, Madam Chair.

In the Pacific Northwest, we have a significant challenge with forests burning at increasing rates. This is partly a change in the amount of rain, but it's also because we have millions of acres of overgrown, second-growth forests that create an easy pathway for fires to go from lower level into the upper stories of the forest.

I was very pleased that there was funding for forest health in the Recovery Act, it has multiple environmental consequences. One is that the forests don't burn, you don't put carbon dioxide in vast quantities into the atmosphere. By thinning these forests, you create forests that are much better for timber stands, in some cases, and certainly forests that are better for ecosystems in others.

Does the issue of thinning forests and addressing forest health fit within the green jobs definition, and can we anticipate your support for continuing to have these sort of jobs included?

Secretary SOLIS. I would think so. It's a broad definition, if we're looking at reducing additional contaminants in the air because of fires, obviously, that would qualify. I know that there is a great interest on the part of the Department of the Interior, the Secretary, who has indicated that they really do want to see more individuals going into the forestry—protecting our forests—but also providing the training that's necessary.

I believe that our Department and the Department of the Interior as well as Agriculture will be working at identifying those areas that are our most need. And I would agree with you that forest fires also plague States like California.

Senator MERKLEY. Yes, I'm certainly aware of that. You have experienced many of the same challenges, and while I appreciate your support in that area, it's very important to the ecosystems and certainly to the economy of my State.

Another area in our State—we're putting up a lot of wind turbines in Oregon. We are delighted to have some very good areas for wind energy, but we would also like to see America creating and building these turbines, exporting them to the world. Part of this puzzle isn't just to create immediate short-term jobs and installation, if you will, or forest health, but also to rebuild the manufacturing infrastructure. Would you like to expand, a little bit, on how our investment in green jobs can help restore manufacturing, and help America supply products to the world?

Secretary SOLIS. Well, I think that's kind of a two-pronged area, because we also need to have businesses that are ready to make the investments, capital investment, and I know that the Obama administration looks very favorably on providing research and development funding and tax assistance—tax credit assistance—for those industries that are willing to get into these kinds of industries.

I do see that kind of folding itself out in the next year or two, quickly, and I do know that there is a strong effort to try to secure where there will be job growth, that we have that job growth occurring where we can manufacture, produce, assemble whatever it is we need for turbines, for wind energy, or whatever it might be here

in the United States. That's going to be a challenge, because much of that steel and other equipment has been imported in the past.

There may be ways of looking at other materials that may be more economical, and ecologically more safe. Of course, that's not my bailey wick, but I'm certain somebody is looking at that now, perhaps Department of Energy and some other folks.

I'm certain that there will be some good opportunities for that.

Senator MERKLEY. Thank you very much, Madam Secretary.

Secretary SOLIS. Thank you.

Senator MURRAY. Madam Secretary, thank you so much for your testimony. Senator Enzi has indicated that he will have some questions to submit. I will, as well, and we would ask for your expediency in responding to those.

Thank you very much for your testimony and for coming before our committee this morning, and you made it through your first hearing.

Secretary SOLIS. Thank you.

[Laughter.]

I look forward to working with you and Senator Enzi on the reauthorization of WIA, and how we can strengthen as we move forward, the green jobs.

Senator MURRAY. All right. Thank you very much.

We will now turn to our second panel, if they will come forward, and we will get your nametags placed in front of you.

As they are coming forward, I'm going to go ahead and introduce them so that we can move forward in an expeditious manner. I will be introducing four of our panelists, and Senator Enzi will be introducing someone from his home State.

I will begin with Lee Lambert, he serves as President of Shoreline Community College. He is a member of the Education Council of the Manufacturing Institute, which is the research, education, and workforce arm of the National Association of Manufacturers. He is also a member of the Washington Campus Compacts Executive Board, and we welcome him here.

Phil Lou is an apprentice with Artisan Electric, Inc., a small, family-owned, union business in Vashon Island in Washington State. He's co-founder of Greenworks Technologies, Inc., which is a company that specializes in renewable energy technologies, such as photovoltaics, solar hot water, energy audits, weatherization and rain catchment. Phil completed the Zero Energy program at Shoreline Community College, welcome here.

Dean Allen is CEO of McKinstry Company, a full-service design, build, operate and maintain form with over 1,600 employees. He currently serves on the boards of the Seattle Biomedical Research Institute, Global Partnerships, the Program for Appropriate Technology and Health, and Seattle Children's Hospital. He also serves on the Washington Roundtable and the Partnership for Learning.

Mark Ayers currently serves as President of the Building and Constructions Trades Department, AFL–CIO. Following his services as a Vietnam-era Naval aviator, Mark began his career as an apprentice inside electrician with IBEW Local 34 in Peoria, WA.

Mark also serves as Chair of the Center for Construction Education and Research, CPWR, co-chair of the Construction User's

Roundtable Tripartite Initiative, and labor co-chair of Helmets to Hardhats, a veterans' employment program.

Senator Enzi.

Senator ENZI. Thank you, Madam Chairman.

Joan Evans is the Director of the Wyoming Department of Workforce Services. She was appointed by the Governor in December 2006. The Department is the State's newest agency dedicated to developing a demand-driven workforce. The Department provides employment and training, business and vocational rehabilitation services throughout Wyoming.

She came to the Department from the Carbon County Higher Education Center in Rawlings, where she's served for 15 years. The Center is community funded, providing adult basic education and vocational programs, and is an outreach center for Western Wyoming Community College.

She's spent much of her career working with adult students who were seeking training for career advancement and developing training programs to meet Wyoming's economy. She served on the Wyoming Workforce Development Council. She has a Bachelor's Degree in Finance, and a Master's Degree in Adult Education, and I'm very pleased that Director Evans was able to join us today, and I look forward to her testimony.

Thank you.

Senator MURRAY. Again, thank you to all of our panelists. You've all submitted written statements. We would ask you to give a five-minute opening statement, and then we will turn to rounds of questions from our colleagues.

Lee Lambert, we are going to begin with you.

STATEMENT OF LEE D. LAMBERT, PRESIDENT, SHORELINE COMMUNITY COLLEGE, SHORELINE, WA

Mr. LAMBERT. Madam Chairman, members of the committee, I am Lee Lambert, for the record, I am President of Shoreline Community College, we are located 10 miles north of downtown Seattle, WA. I am pleased to be here today to speak on behalf of the Washington State Board for Community and Technical Colleges, and the 34 colleges that comprise our system.

It's a new technology, but it's the same, old mission and community and technical colleges across this country, to 1,200-plus, we are delivering on green job training.

In the State of Washington, through our Centers of Excellence, and through our individual campus locations and programs, we are also delivering on green job training.

At Shoreline Community College, we have put an emphasis in one of the areas around renewable energies, automotive program. We are currently training students and incumbent workers to work on the latest advanced vehicle technologies, whether it be hybrid, soon-to-be plug-ins, and all electric cars.

Also, in our solar panel design and installation program, we're training students to understand how to conduct energy audits, how to assess consumer consumption levels in the home, as well as designing solar electric systems, and then—and this is very important—working with licensed electricians to complete the installation process of those solar panels.

How are we doing this? We're doing this through our partnerships, and we're very good at partnerships—we partner with the manufacturers, with business and industry, with labor, with our local workforce development councils and Boards, with our K–12 systems, with local governments, with Federal and State governments, with other colleges and universities. In other words, we know partnerships, we know how to cultivate them, we know how to grow them, and we know how to maximize them in order to train workers for the green economy.

Access—as you all are aware, community and technical colleges are about open access. It's not enough to bring people into our training programs, we need to be successful in training those students through those training programs. In the State of Washington, we have developed an innovative approach to access, and it's called Integrated Basic Education Skills Training, in short, I-BEST.

I-BEST brings together content instructor, along with the basic skills instructor, working together to ensure that our students—from all of our backgrounds, whether they're disadvantaged, low-income, minority populations, women—will be successful. When they see that ladder, they can climb that ladder along the pathway to success in a high wage, high-demand field.

Also, faculty—we cannot deliver these programs without a well-trained, qualified faculty. Our ability to recruit, retain, and develop them is essential to us moving forward.

Let me use an example that really brings all of this together, in terms of partnerships, access, and faculty. A few years ago, Shoreline Community College received a community-based job training grant through the Department of Labor. We focused it with a partnership—in partnership with Toyota, we pursued this grant to create an entry-level, general service technician program.

In creating that program, we also worked with our community-based partners, with our Workforce Development Councils, etc, to identify low-income, disadvantaged students to participate in the program. Because the program was focused on reaching out to those who have historically been left out of the educational process.

Through that, and bringing together our content faculty with a basic skills faculty member, we demonstrated success in a very short period of time, that we can move students from where they are, to where they want to be in their future.

In short, community and technical colleges are getting the job in green job training. We're developing the programs, we're continuing to develop the programs and just like Shoreline Community College, many of the other colleges are doing this, and your investment now, and your investment in the future will continue to yield positive results.

Thank you very much.

[The prepared statement of Mr. Lambert follows:]

PREPARED STATEMENT OF LEE LAMBERT

Mr. Chairman, members of the committee, my name is Lee Lambert, President of Shoreline Community College, located a few miles north of downtown Seattle, WA, and thank you for the opportunity to address this topic that is of such importance in these challenging economic times.

Community colleges are the closest thing this country has to a National network of ubiquitous, low cost and high quality training providers. At the national level,

the American Association of Community Colleges (AACC) represents the Nation's more than 1,200 community colleges. We support the AACC positions in the following areas that will allow us to revamp, renew and implement the kinds of programs we're here to talk about today: Training Capacity, Trainer Eligibility, Workforce Boards, Infrastructure, Adult Basic Education, Entrepreneurship, and Labor Exchange Information.

As it is across the country, Washington State's comprehensive community and technical colleges are charged with being all things to all people. It is a difficult task, but one that community and technical colleges embrace because we know the role has impacts on such a broad scale, from the lives of our students to the health of the Nation's economy.

The one quality that allows community and technical colleges to meet that spectrum of need is flexibility. At Shoreline Community College, we both respond to and anticipate the needs of the community. Just as Shoreline has done for the past 45 years, we are addressing the needs of the emerging green economy by focusing on four areas: programs, partnerships, performance and points of consideration.

While today I'll highlight two green-jobs programs at Shoreline, one new and one existing, please note that many of our other existing programs are moving toward becoming green-related by virtue of new technologies and our changing personal behaviors.

ZERO ENERGY TECHNOLOGY

Shoreline was one of the first schools in the country to launch a "photovoltaic system design" program. That means students learn how to assess a building's power needs, design an appropriate solar-panel system and the installation to not only meet the owner's needs, but also actually feed power back to the electric utility grid. That may sound way ahead of the curve, but remember our program started just a year ago and this curve is headed nowhere but up.

Solar in damp, cloudy Seattle? Well, if it works there it will work anywhere and one need only look at the numbers to see this is more than wishful thinking. Currently, Germany leads in photovoltaics with more than 50 percent of all the system installations in the world. When the sun shines in Bavaria, 20 percent of that region's electricity needs are met by photovoltaics. Surprisingly Washington State has more sunny weather than Germany.

Shoreline Community College is now home to a demonstration project called the Zero Energy House designed and built by students enrolled at Washington State University, one of our major partners. Earlier this month, on April 1, it snowed on campus, but the solar panels on the Zero Energy House kept the heat pump going and still had the power meter running backward, feeding the grid. Before I address our programs, Senator Murray, you will be proud to know that the Shore-North Cooperative Preschool just received a 2-year endorsement as an eco-healthy child-care program for their efforts in reducing the Preschool's carbon footprint.

Shoreline's solar design class is the first piece of our growing Zero Energy Technology Program. The name refers to a "net-zero" energy use goal and the program also includes classes in:

- Energy auditing, which helps determine a building's overall energy use and identify cost-saving efficiencies;
- Building design, to educate and train energy efficient design concepts;
- Blueprint reading;
- Solar space and water heating system design; and
- Renewable energy.

All the classes Shoreline offers are in direct response to expressed needs of business and the labor market. Indeed the program is vibrant and growing because of the strength of its partnerships, which include:

- Education—Washington State University;
- Labor—International Brotherhood of Electrical Workers;
- Local businesses—Silicon Energy, Outback Energy;
- International business—REC Silicon;
- Local government—Cities of Seattle and Shoreline;
- State government—Incentive legislation;
- Federal Government—Dept. of Labor grants;
- Utilities—Seattle City Light; and
- Advocacy groups—NW Solar Center, Shoreline Solar Project.

The result is nearly 300 students with State-certified green job skills have been trained since the inception of the program. Some students who enrolled in the Zero Energy Technology program were currently employed and wanted to upgrade their

skills, some students found employment with various Washington State businesses after their training and some became entrepreneurs starting their own new businesses.

Shoreline continually evaluates the quality and responsiveness of its professional and technical training programs to meet the needs of employers and businesses. When the Photovoltaic System Design class launched, there were approximately 200 applications for solar-panel system installations statewide, just 2 years later, there are more than 1,000. Of course not all of that is due to our program, but it does help outline the need. In January, the Zero Energy Technology program was honored with a national Bellwether Award as one of the top 10 workforce development programs in the country.

I spoke of the ancillary impacts: the spinoffs, of green technologies and green-jobs training and here are just two:

• Shoreline offers a highly acclaimed respected manufacturing and computer-controlled machining program. As the photovoltaic-system design students work through installation problems, they are generating design-change ideas for the solar-panel mounting brackets. These aluminum parts are exactly the kind of item our students are learning to design and manufacture in the computer-controlled machining program. As the market grows, these industrial cross-pollinations will also grow, integrating new and existing technologies, creating new jobs for our economy.

• A number of Washington State's community and technical college programs, including Shoreline's, train students in energy auditing, or how to assess a building's energy efficiency. The auditing skills learned in these programs open the door to an array of energy conservation/efficiency employment opportunities, including weatherization, insulation, heating, ventilation and air conditioning technology and others.

AUTOMOTIVE TECHNOLOGY

Just a decade ago, one might not have immediately thought of an automotive technologies program as a green-job opportunity. Today, it is one of the most rapidly changing manufacturing technology areas and Shoreline Community College is responding to meet the needs of manufacturers and society.

Shoreline's automotive program stands out as an excellent model of what partnerships and collaboration can achieve in these difficult economic times. Our program is built around the needs of the manufacturers, suppliers, Puget Sound Auto Dealers Association and students. Shoreline provides certified and sponsored training from: General Motors, Chrysler, Honda, and Toyota.

All of those manufacturers are moving rapidly into hybrid, plug-in hybrids, and all-electric technologies. The program partnerships are key to assuring that cutting-edge quality is maintained. Students are guaranteed jobs when they begin the program because they are sponsored by individual new car dealers representing the four vehicle manufacturers. Students receive training in the very latest in automotive technology advancements.

Toyota recently recognized Shoreline as one of their top training programs in the country, honoring it with the T-Ten Award for the third year in a row. Looking at just the training programs involving direct hybrid technology training, nearly 400 students have entered the workforce since we began this level of training a few years ago with new green-jobs skills. The dealer/manufacturer relationship completes the circle as each manufacturer certifies the students.

The program is expanding in large part due to those partnerships. Groundbreaking is imminent on a 26,000-square-foot addition to the automotive facility at Shoreline Community College. The capital costs of about $4 million will be shared by the State of Washington, the Puget Sound Auto Dealers Association, local new car dealers and manufacturers, most notably $1 million is being provided by Toyota.

In addition, the college has a General Service Technician program, initially developed through funding received by the U.S. Department of Labor. The program is an entry-level automotive technician curriculum and allows outreach to underserved communities such as students with limited English proficiency, out-of-school youth and dislocated workers. English as a Second Language and Adult Basic Education instructors work side-by-side with the automotive instructors to ensure student success. Students who complete this industry-certified curriculum earn a Certificate of Proficiency and move easily into entry-level positions as general service technicians, making good salaries now while putting them on a career and education pathway for further advancement.

In November 2008, the Automotive Training and Career Opportunities Partnership (ATCOP) at Shoreline Community College received the Governor's Award for Best Practices in workforce development. The College's General Service Technician

(GST) training program received this honor awarded by the Workforce Training and Education Coordinating Board (WTECB). WTECB recognizes local and regional agencies, organizations, and community and technical colleges for their leadership and excellence in developing programs and achieving results to advance best practices in workforce development. There were 21 projects nominated for this award, six of which were selected to receive the Governor's Award.

In making the award, the WTECB said it was looking for programs that are innovative, replicable, and transferable—the key elements of a best practice.

In addition to educating and training for new employees, the Shoreline automotive program provides skills updating and training for thousands of incumbent workers. These short-term training programs bring existing workers to state-of-the-art facilities to learn the latest programs and techniques. Indeed, with the recent closure of the General Motors Training Center based in Portland, OR, Shoreline Community College will become a hub for incumbent worker automotive technologies training in the West.

While hybrid, plug-in hybrid, and all-electric automotive technology is still new, think about the lifecycle of an automobile and you'll see the next step for Shoreline's automotive technologies program. While much of the technology is currently proprietary, eventually owners of those now cutting-edge hybrids are going to start taking them to the thousands and thousands of independent vehicle repair shops. Extending the training and skills to those employers will be critical in the not-so-distant future.

Through existing and coming programs, Shoreline expects to educate and train 2,500 incumbent manufacturer-sponsored workers and another 5,000 at independent repair shops over the course of the next few years. In partnership with the Workforce Development Councils and community-based organizations, Shoreline is working to track the success of these students with a program called Career Navigator.

I've told you of the successes, now, let me tell you how our flexibility is allowing us to address some of the challenges that accompany innovative and cutting-edge training programs.

Many of those who seek employable, green-jobs training lack basic literacy skills. To get those students to the point where they have the math, reading, language and even the so-called "soft" or performance skills to participate in the training, we develop programs that address those needs.

Through the work of the State Board for Community and Technical Colleges, Washington State has developed an Integrated Basic Education and Skills Training program, better known as I–BEST, and a student financial assistance program called Opportunity grants to help meet the needs of under-prepared workers.

I–BEST provides educational access and support for Adult Basic Education (ABE)/English as a Second Language (ESL) so students can progress further and faster along career pathways. I–BEST pairs ABE/ESL instructors with professional-technical instructors in the classroom, working together to advance students in both basic academic and professional-technical skills. Washington State currently has 128 different I–BEST programs, many aimed at green jobs.

Shoreline has already had success in pairing I–BEST with the Automotive Technology Program and we're now looking to replicate that success with the Zero Energy Technology program.

Shoreline has utilized the opportunity grant program to support the financial needs of under-prepared workers where traditional financial aid programs leave off. This allows our students to not have to make the difficult choices of whether to participate in a job training program versus taking a second job to meet their basic needs.

OTHER GREEN JOBS PROGRAMS

While I'm understandably proud of Shoreline's programs, many Washington State community and technical colleges offer green-jobs programs, including:

Green Construction and Remodeling—Bates Technical College

Five-course certificate (10 credits) in "built green" and LEED methods, appropriate building materials, air and water quality, and marketing and sales. Bates is an approved education provider for the U.S. Green Building Council's (USGBC) online green construction and remodeling series.

Green/Sustainable Design—Bellevue College

Certificate (15 credits) in the design of "green" interior environments or specialist in healthy interiors.

Solar/Photovoltaic Design—Columbia Basin College

Short certificate (5 credits) to select and/or certify solar panel systems for residences and commercial buildings and prepare students for the Silicon Energy Manufacturing Solar Installation Certificate and the National Photovoltaic (PV) Installer Certification through the North American Board for Certified Energy Practitioners (NABCEP).

Associate of Applied Science—Transfer degree in Environmental Technologies and Sustainable Practices—Cascadia Community College

Two, 2-year degree tracks with two related certificates:

- Business track: Graduates address savings and spending using applicable terms and tools.
- Technical track: Graduates perform in a hands-on environment.
- Certificate 1: Solar PV System Specialist (51-57 credits) covers commercial and residential systems.
- Certificate 2: Energy Management Specialist (64-68 credits) covers conservation and efficiency in new and existing buildings.

Interior Design/Green Design—Clover Park Technical College

Certificate (19 credits) in historic preservation, sustainable environments and independent study courses.

Green Real Estate—North Seattle Community College

Two-quarter, seven-course certificate (16.5 credits) that includes some continuing education fulfillment and qualification as a Built Green Certified Professional. Other topics include: green building materials, energy efficient design and development, healthy buildings, indoor air quality and marketing.

Zero Energy Technology—Shoreline Community College

Three certificates and a pre-apprenticeship program:

- Certificates: Prepare students for the Silicon Energy Manufacturing Solar Installation Certification and the national PV Installer Certification through the North American Board of Certified Energy Practitioners (NABCEP)
  - Solar/Photovoltaic Energy Designer (5 credits)
  - Zero Energy Building Practices (15 credits)
  - Zero Energy Building Practices (59–63 credits)
- Pre-Apprenticeship: Training for Green Careers in the Trades (12 credits) developed with City of Seattle and Seattle City Light

Energy Auditor—South Seattle Community College

Certificate (12 credits) for residential buildings.

Sustainable Plant Production—South Puget Sound Community College

Certificate (41–44 credits) in plant propagation, production and marketing of native and nonnative horticultural crops.

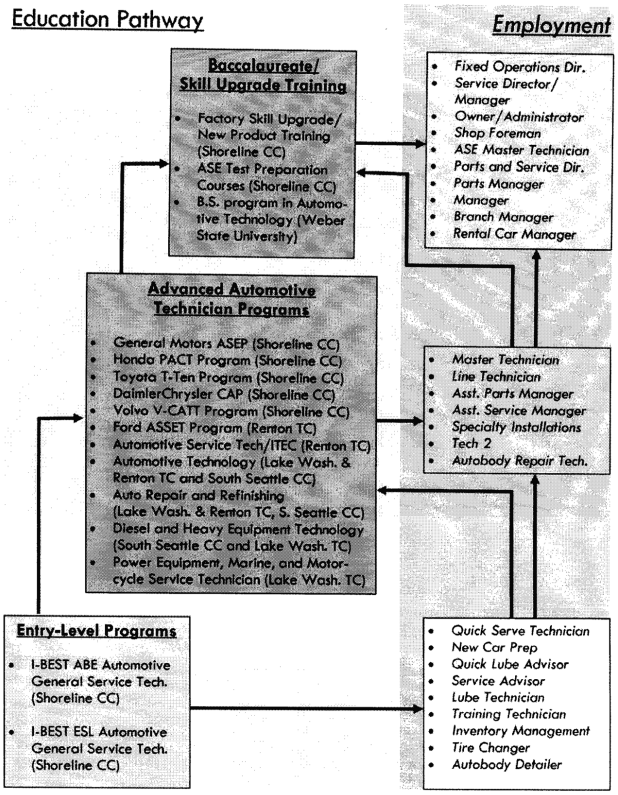
Associate of Technical Sciences in Sustainable/Organic Fruit Production—Wenatchee Valley College

Two-year degree developed cooperatively with Washington State University in horticulture, integrated pest management production, processing and marketing of perennial fruit crops.

In short, I would like to thank the committee for giving me an opportunity to share some of the exciting opportunities the State of Washington is providing its residents in the area of green jobs. As you have heard, the Washington State Board for Community and Technical Colleges and our 34 community and technical colleges are moving Washington State forward in training and educating the green workforce through its innovative programs and strong partnerships with business and industry, community-based partners, the local workforce development councils and myriad of other State and local organizations.

Thank you.

Automotive Service Technician Training Pathway



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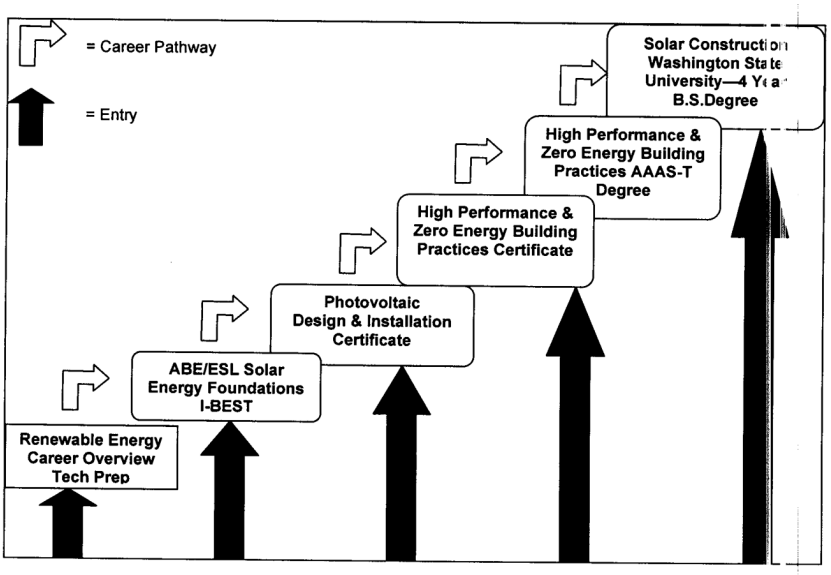

Senator MURRAY. Thank you.

Phil Lou.

STATEMENT OF PHILLIP C.L. LOU, FORMER STUDENT IN THE SHORELINE COMMUNITY COLLEGE SOLAR DESIGN AND INSTALLATION PROGRAM, VASHON, WA

Mr. LOU. Madam Chairman, and members of the committee, my name is Phil Lou, and I am from Vashon Island, WA. I am honored and humbled to be here today, thank you for the opportunity to share my story.

I am a college graduate, and have worked as a fisheries biologist, foreign fisheries observer, and commercial fisherman. For the past 15 years, I've been working with wood. I've built homes, fine cabinetry and furniture, and installed custom yacht interiors. The work was interesting, challenging and financially rewarding, but I did not find it fulfilling. I wanted to work in a field that benefited the community and the environment.

As a teenager in Honolulu, HI, I joined the Sierra Club High School Hikers Program. We spent weekends and school holidays hiking, backpacking and working on conservation projects. I developed a deep appreciation and respect for nature and conservation.

After college, I served in the Peace Corps as an inland fisheries volunteer. For 2 years I lived in a small village in the West African Nation of Cameroon. The village had no electricity or running water. It was a stark contrast between my life in the United States and the lives of the villagers. My first practical application of solar energy was when I heated water in a black jug in the sun for my evening baths.

These are some of the experiences that formed the values that led to my interest in renewable energy. In searching for formal education, I found Shoreline Community College's Zero Energy

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Technology Program. Classes are offered in photovoltaic design and installation, solar-thermal water heating, residential and commercial energy audits and green building practices.

I enrolled in the photovoltaic class, and once a week I took two ferries and made the 2.5 hour commute up the shoreline from Vashon Island. The class taught me theory, design and safe installation practices of solar-electric generating systems.

We benefited from our instructor, Mike Nelson, and his 33 years of experience with renewable energy systems. In addition to classroom instruction, we had hands-on experience by installing a solar ray on campus.

In Washington State, an electrician's license is required, by law, to install solar rays that are connected to the electrical grid. I obtained an electrician's trainee card, and I am now serving my apprenticeship with Artisan Electric Incorporated, a small, family-owned, union business, on Vashon Island.

The skills and education I gained from Shoreline Community College are an asset to this company. My current responsibilities include photovoltaic design and installation. Our company has completed three installations, and there are four more scheduled for May. We have seven additional installation proposals.

With what I've learned from Shoreline Community College, and with help from my employer, Jason Williams, I was able to install a solar array in my home, and it works. My family and I watch with satisfaction as our utility meter spins backwards on most days, which means our array is generating more electricity than we're using, and the balance is flowing back into the local electrical grid.

In addition to work I'm doing with Artisan Electric, I am a co-founder of Greenworks Technologies, formed by students I met in the Zero Energy Program. This company will specialize in renewable energy technologies, and we recently presented our first solar-thermal installation proposal.

There's a perception that community colleges are an educational steppingstone to universities. It may be true in some cases, but in my case, it was the reverse. Twenty-four years after graduating from the University of Oregon, I attended Shoreline Community College to gain the specialized skills necessary to participate in the emerging green energy industry.

This new work has been challenging, satisfying, and inspiring. I think often of the children—including my 15-year-old son, Jeffrey Lou—and what kind of world we will leave them. My hope is that this will be my contribution to a responsible solution for our future energy needs.

Thank you, mahalo, and melohau.

[The prepared statement of Phillip C.L. Lou follows:]

PREPARED STATEMENT OF PHILLIP C.L. LOU

Mr. Chairman and members of the committee, my name is Phil Lou and I am from Vashon Island, WA. Thank you for the opportunity to share my story.

I am a college graduate and have worked in various fields as a fisheries biologist, foreign fisheries observer and commercial fisherman.

However, for the past 15 years, I've been working with wood. I've built homes, fine cabinetry and installed custom yacht interiors. The work was interesting, challenging, and financially rewarding, but I did not find it fulfilling. I wanted to work in a field that benefited the community and the environment.

As a teenager in Honolulu, I joined the Sierra Club High School Hikers. We spent time hiking, backpacking and working on conservation projects. I developed a strong appreciation for nature and conservation.

After graduating from college, I joined the Peace Corps as an inland fisheries volunteer. I lived in a small village in the West African nation of Cameroon for 2 years. The village had no electricity or running water. There was a stark contrast between my life in the United States and the lives of the villagers. My first practical application of solar energy was when I heated water in a black jug in the sun for my evening bath.

These experiences formed my values that led me to an interest in renewable energy technologies. In searching for formal education, I found Shoreline Community College's "Zero Energy Program" which offers classes in photovoltaic design and installation, solar thermal water heating and residential energy audits. I enrolled in the photovoltaic class and made the 2½ hour, twice weekly, two ferry boat commute to Shoreline from Vashon Island.

The photovoltaic class taught me theory, design and safe installation practices of solar electric generating systems. We benefited from the 33 years of experience in renewable energy systems of our instructor, Mike Nelson. In addition to classroom instruction, we had hands-on experience by installing a solar array on campus.

In Washington State, an electrician's license is required by law to install solar arrays that are connected to the electrical grid. I obtained an electrician's trainee card and am currently an apprentice with Artisan Electric, Inc., a small, family-owned union business on Vashon Island. The skills and education I have gained from Shoreline Community College are assets to this company. My current responsibilities include photovoltaic design and installation. Our company has done three installations and there are two installs scheduled for the first week of May. We have eight additional installation proposals.

With what I've learned from Shoreline Community College and with help from my employer, Jason Williams, I was able to install a solar array on my home. My family and I watch with satisfaction as our utility meter spins backward on most days; meaning our array is generating more electricity than we are using and the balance is flowing back into the local electrical grid.

In addition to the work I'm doing with Artisan Electric, I'm a co-founder of Greenworks Technologies, Inc., formed by students I met in the Zero Energy Program at Shoreline Community College. This company will specialize in renewable energy technologies such as photovoltaic, solar hot water, energy audits, weatherization and rain catchment.

There is a perception that community colleges are educational stepping-stones to universities. It may be true in some cases, but in my case it was the reverse. Twenty four years after graduating from the University of Oregon, I attended Shoreline Community College to gain the specialized skills necessary to participate in the emerging Green Energy industry.

This new work has been challenging, satisfying and inspiring. I think often of the children, including our 15-year-old son, Jeffrey Lou, and what kind of world we will leave them. My hope is that this will be my contribution to part of the solution for our future energy needs.

Senator MURRAY. Dean Allen.

STATEMENT OF DEAN ALLEN, CHIEF EXECUTIVE OFFICER, McKINSTRY COMPANY, SEATTLE, WA

Mr. ALLEN. I thank you, Senator Murray. I'm happy to be here, representing McKinstry. We have, for the last 49 years, focused on growing our company around helping our employees achieve their goals, as well. As mentioned in our submitted brief, we've been—for the last five decades—working in the design, build, operate, and maintain arena, performing electrical, and mechanical and energy conservation work.

We have about 1,400 staff, we've started in the Pacific Northwest, but now have offices in 13 cities around the country, including a brand-new, 50,000-square-foot space we opened yesterday for our staff in Portland, OR.

First, I'd like to say what we do in the area of energy efficiency. We partner with customers, and look for ways to lower their energy costs, their energy consumption. They end up with new infrastructure, lowers their carbon footprint. The projects are paid for by the cost avoidance of the utility that's saved, and we create green jobs along the way.

It's a revenue-neutral strategy, it doesn't require a lot of stimulus, although we're hopeful that some of it will find its way in that direction. For your interest, there's about a trillion dollars worth of revenue-neutral projects available, by our estimation, in America here in the next 10 years. These are projects that we can create green jobs on.

In terms of why we do what we do, for the last 49 years, and in particular, for the last 10 or 15, we have been focusing on energy efficiency. We find that when we work with customers, we lower their utility bills and their utility use by somewhere between 30 and 50 percent. If half of the energy in America is wasted, there's a gold mine available for us, in terms of getting out and working on energy efficiency.

It's especially important to prioritize energy efficiency first, because it provides the runway that we need for new technologies and for renewable energy solutions to find their way into the marketplace. In our opinion, the first wave of jobs is about energy efficiency, the second wave that we ought to be training for, is about renewables, and a smart grid.

The next point I'd like to make is about how we do it. I think we are, in some ways, unique to other folks. Approximately, half of our staff are professional engineers, office folks, that are innovating systems, providing professional design and 3–D modeling and fabrication and monitoring the systems that we put in place. The other half are union craftsman that are working out in the field, putting these installations in place. I think this gives us a unique perspective on the intersection between the technology and the innovation, and sort of the higher ed aspects of green jobs, but also the green color side of our crafts folks.

Four points I'd like to make today. First, individual companies like mine need to take responsibility to train their employees, both train, retrain, and manage their pipeline. We spend a tremendous amount of time in our community working with community colleges, voc techs and our union partners in their apprenticeship programs, and we need to take responsibility to grow our company, and we do.

We have our own functioning McKinstry University inside of our company, we're just finishing our—building a second training center for our staff—and working with our partners. Individual private companies like ours need to take responsibility and not wait around for solutions to come from afar.

Second, as many of the Senators have said, it's really important that we leverage the tremendous assets we have in training in America today. You know, we have agreements with 40 different union crafts organizations in different geographies that we work in, in different crafts—plumbers, pipe fitters, sheet metal workers, electricians, and such. These folks are experts at training, they're

done in joint apprenticeship training programs, where management is also providing help and support to these programs.

And likewise, in our voc tech programs—we need to work with community colleges and voc techs to add curriculum, to add focus, to provide instruction, to provide work opportunities for these folks, and internship programs, and leverage the existing system we have, and not build a parallel system.

I would re-emphasize that we want to be careful also not to do all of our training on renewable energy systems that will be coming further in the future, as we have 5 or 6 million people that need to get put back to work, and energy efficiency can happen now.

Third, it's really important that industry identify the skills that they need, and then we have a way to coordinate that back to our educational partners. In our work, it's about multidisciplinary engineering work, it's about doing the math on renewable energy projects, and energy efficient projects, it's about slight modifications to the skill set of our electrical and mechanical and other trades folks, so that they can have curriculum instituted into their work.

It's about energy auditing and facility managers, so that we can make sure that we are managing these systems when we're done, so they actually do produce the savings that we get when we first do the retrofits. Certainly, you know, the maintenance thereof.

Fourth, and last, I would like to say that, we think that the real focus on this also needs to be on the K–12 system. I think we do a tremendous disservice to our kids in America when we underemphasize math and science. We are, in the past, have thought about math and science in our K–12 systems being about kids going on to higher ed. In our world with 1,000 union craftsman, I can tell you that if you graduate from high school, and you can't pass the math and science competency tests, you can not pass through the filter to become an apprentice, as a plumber or a pipefitter or a sheetmetal worker, or an electrician.

While we're thinking about green jobs, we also need to be thinking about strengthening the underpinning of our K–12 system, as well.

Thank you for the opportunity.

[The prepared statement of Mr. Allen follows:]

PREPARED STATEMENT OF DEAN ALLEN

"People are the foundation of our organization, and through their efforts the goals and values of the corporation are attained."

Mr. Chair, that one sentence summarizes our entire approach to business. We believe both our company's and our country's futures are directly tied to our ability to rise to the challenge of ensuring every worker has the skills they need to succeed and support the emerging green economy. I'd like to thank you, and the entire committee for spending time on what I consider to be one of the most critical challenges facing our country today.

For five decades McKinstry has transformed the way in which we design, build, and optimize the built-environment. Our company originated in the Pacific Northwest as a high quality mechanical contractor employing union-affiliated construction trades. We now have 13 offices located in Washington, Idaho, Oregon, Colorado, Kansas, Minnesota, Montana, Texas and Wisconsin. Our company operates using core values that include developing legacy relationships with our clients, financial stability that is exemplified in our diverse offerings, and a caring for both the communities we serve and the people that we have the privilege to employ. We have weathered many economic cycles while holding true to these core values. Each eco-

nomic downturn has reinforced our long-term strategy to focus on services for the built environment that maintain employment or actually increase employment during economic struggles. Since the early 1990s we have positioned our company to be diversified and able to withstand economic downturns, such as the one we now face. While continuing to focus on quality craftsmanship, over the last decade we have focused on making the built environment more energy efficient. We have expanded beyond the Pacific Northwest to provide our energy and sustainability services across the country. We are uniquely qualified to help our Nation move quickly to put people to work making buildings more efficient, lowering energy consumption and reducing their associated carbon emissions. Our results have proven that a focus on green does create significant numbers of sustainable, family-wage and career track jobs while contributing directly to preserving or enhancing environmental quality.

McKinstry has received national recognition for leadership in energy efficiency and green job growth. It is our commitment to sustainable, design/build practices and for promoting a new direction for an energy efficient America that has helped make us this industry leader. Our efforts have resulted in the significant reduction of operational costs over the life of buildings, paying for themselves many times over, and improving the physical and working environment for occupants. We have also been recognized as a model for other companies in the promotion of green jobs, application of sustainable business practices, and innovation in reducing the country's dependence on foreign energy sources. Our efforts in these areas have caught the attention of Federal, State and local policymakers as well as labor and environmental leaders. We are, therefore, well-suited to assist in creating green jobs that promote short- and long-term energy efficiency.

Over the last 20 years McKinstry has expanded our maintenance, operations, energy efficiency, renewable energy, and sustainability teams to over 500 highly skilled green collar jobs. These jobs include union service and commissioning technicians, energy auditors, engineers, sustainability experts, project managers, and a variety of support staff. These teams stabilize building operations by developing energy efficiency projects that are performed by construction trades professionals such as electricians, sheet metal workers, plumbers, pipe fitters and carpenters. Wherever possible, these projects are supplied by vendors providing American-made energy efficiency products.

Sustainable job creation has been an important, long-term strategy of McKinstry. This commitment to enduring employment opportunity has enabled us to provide a continuum of quality service to our customers and stable, diversified career prospects for our employees. Of note, McKinstry recently analyzed job creation resulting specifically from our energy efficiency projects. We have found that for every million dollars spent on making our built environment more energy efficient, 20 jobs are created. This includes approximately nine direct McKinstry project hires, six employed indirectly through vendors and suppliers and another five support positions. Our experience shows a ratio of four to five trade and vendor positions for every one highly skilled green collar employee deployed on an energy project.

To validate our results, we reviewed the findings of the September 2008 Green Recovery Report created by the Center for American Progress (CAP) and the Political Economy Research Institute (PERI) and verified that their assessment aligns with ours. In 2008 alone, over 1,500 people delivered energy efficiency and sustainable solutions to schools, universities, hospitals, city facilities, and private commercial buildings on a national basis as a direct result of McKinstry's energy retrofit projects.

Construction projects focused on making existing buildings more energy efficient will create more durable, long lasting American jobs. With over 80 billion square feet of non-residential building stock and over 170 billion square feet of residential building stock it would take nearly a decade to deliver energy efficiency upgrades nationally. In the non-residential building stock, approximately 5 billion square feet of new buildings are constructed, approximately 5 billion square feet need major renovations, and about 1.75 billion square feet of existing buildings will be demolished on an annual basis. It is expected that over the next 30 years, three-quarters of this built-environment will either be new or renovated. This indicates the long-term opportunities for employment in this particular market segment.

Energy efficiency will play a major role in carbon reduction in new buildings, as is the case in existing buildings The American Institute of Architects (AIA) 2030 Challenge calls for all new buildings and major renovations to reduce their fossil-fuel GHG-emitting consumption by 50 percent by 2010. Continued incremental progress by 2030 is expected reducing consumption for new buildings to carbon neutral. As new technologies are created and scaled, we will need to revisit existing and new building stock to perform additional upgrades featuring the latest energy effi-

ciency innovations. This strategy will be the most successful path to low carbon or carbon-neutral buildings at the end of the first 10-year cycle and will create millions of sustainable employment opportunities or "green jobs" to accomplish this task.

OUR PEOPLE

McKinstry directly employs over 1,400 staff and union employees nationwide. We are considered the largest construction industry union employer in the greater Seattle area. In addition, we routinely employ over 20 paid interns from various colleges, universities and vocational schools to help them learn about our business. Our employee base includes more than 100 engineers, 50+ LEED Accredited Professionals as well as Certified Energy Managers.

McKinstry is proud to be a Union employer of the very best and highly trained trades people in our industry. At this time we employ members of the following Unions:

- Plumber & pipe fitters/HVAC/Refrigeration;
- Sheet Metal Workers;
- Electrical Workers;
- Sprinkler Fitters; and
- Carpenters/Painters/Tapers/Laborers.

During most of 2008 McKinstry experienced unprecedented growth in our field union labor crews, maintaining an average of 1,000+ during the year. Union workers from all regions of the United States sought work in Washington as their home States could not provide the union jobs they were trained to do. McKinstry became an employer to many of them during this period of time. While we are continuing to add professional engineering and sustainability staff, McKinstry has felt the downturn in the new construction economy with our current union field crew levels of 700. The increased focus on building energy efficiency and retrofits will not only create new green jobs that don't currently exist but enable redeployment of these skilled crews to those opportunities.

Skills training is integral to sustainable job creation and to the technical requirements of building energy efficiency. Our union partners facilitate that skilled learning environment through a formalized apprenticeship training program typically lasting a period of 5 years. Training includes challenging classroom experience, hands-on instruction in their state-of-the-art training facilities and on-the-job education through employment at McKinstry or other signatory contractors. Instructors are industry-specific experts in their field and often are tenured McKinstry union employees interested in teaching others their craft. There is a rigorous entry process into these apprenticeship programs including testing in higher level math, reading, writing and critical thinking aptitude. Continuous education is a priority upon graduating from the apprenticeship and required to maintain many of their technical certifications.

McKinstry is actively engaged in this training process through countless staff hours contributed to union educational boards, Jointly Administered Training Committee (JATC) involvement and in providing instructors for these training opportunities for the union members. Skilled workers are critical for the success of our organization and to successfully meet the demands of an energy efficient built environment.

McKinstry is widely recognized within the industry as the preferred place to work for union employees due to this training commitment, the availability of the best tools and equipment in the industry, the opportunity for innovative jobs, our steadfast focus on employee safety and their welfare and our encouragement of every individual to perform at their best.

MCKINSTRY UNIVERSITY

Continual training and a focus on innovation differentiates McKinstry and our employees. Energy efficiency and best practices in sustainability are central to the curriculum. McKinstry offers diverse training programs targeted at growing the capabilities of our people and, by extension, our company. Under the umbrella of McKinstry University, we offer learning opportunities in the following key areas:

- Technical Training;
- Company and Industry Knowledge;
- Professional Development: Communication, Supervision & Leadership;
- Software Skills and Computer Aided Design;
- Personal Development/Wellness; and
- Sustainability.

Within the technical and industry curricula are a variety of options related to sustainability and/or green jobs. McKinstry University offers the "McKinstry Green Certification," which includes becoming a LEED Accredited Professional in addition to mastering McKinstry-specific training in green best practices. Our commitment to our employees mastering this topic includes an 8-week intensive preparatory class for the LEED certification. Additionally, McKinstry employees are actively involved in affiliations associated with sustainability by attending their continuing education conferences and speaking as industry experts on their training panels.

All of our union partners are actively adjusting and expanding their training curriculum to embrace new technologies and approaches required to support energy efficiency projects. The United Association of Plumbers & Pipefitters has launched a new Green Awareness Certification which covers topics such as energy efficiency, energy management, alternative energy, HVAC systems, solar systems and plumbing. Local 32 plans to submit to the State that this certification class be a Continuing Education Unit (CEU) requirement for the Washington State Plumbing License making this an industry priority. We are encouraging all of our employees to increase their energy efficiency skills and are actively supporting this training deployment effort.

COMMUNITY IMPACT—WORKFORCE DEVELOPMENT AND EDUCATION

Our commitment to training and building a sustainable pipeline of skilled workers does not end with our internal efforts and union partnerships. McKinstry employees actively serve on numerous workforce development committees and in various programs related to workforce development, green jobs training, continuing education, and classroom teaching and/or classroom curriculum planning. Committees we serve on in addition to the JATC's described above include STEM (Science, Technology, Engineering, and Mathematics), Partnership for Learning, Seattle Vocational Institute Board, SMACNA Education Committee, Green Building Council, Northwest Energy Alliance and the MCAWW Academic Relations and Education Committees to name a few. Through these committees and programs, McKinstry helps determine workforce needs, helps to promote industry awareness, facilitate recruitment of interns and employees, and build collaboration with local training facilities, vocational technical training schools, colleges and universities for future workforce placement. This enables us to proactively influence the direction of educational curriculum to support the diverse skills necessary for the green workforce of the future.

McKinstry is also active in promoting careers in our industry in the public school system. An example of that involvement is The Architecture, Construction, and Engineering (ACE) Mentor Program of America, Inc. ACE is a unique partnership among industry professionals—architects, interior designers, engineers, construction managers, college and university representatives, and other professionals from related corporations and professional organizations—who work together to attract young people to their professions. The program's mission is to enlighten and increase the awareness of high school students to career opportunities in architecture, construction and engineering and related areas of the design and construction industry through mentoring; and to provide scholarship opportunities for students in an inclusive manner reflective of the diverse school population. McKinstry employees actively participate in these mentoring opportunities as yet another avenue to build a future pipeline of engaged, technical workers.

A particularly illustrative example of McKinstry engagement with youth in the secondary school system is our partnering relationship with one of our customers, Northshore School District, in their alternative high school program, Secondary Academy for Success (SAS). The program includes endeavors with Career Speakers, Human Resources, K20 Running Start and Public Relations. This partnership exposes 11th and 12th graders to the variety of opportunities in our green economy. Our first encounter with students provided a "blue," "white" and "green" collar perspective on what it takes to start a career in that field. Our speakers included a "blue collar" HVAC Technician from our Service Department, a "green collar" Knowledge Response Center Remote Operation Center Manager and two "white collar" Computer Aided Drafting and Design Drafters. Students gained visibility into the variety of options that are available to them and insight into the basic skills needed to start down that career path. This program targets students that may or may not be on a typical college track and provides them understanding of the critical thinking skills and technical aptitude in math and science required to be successful. Students are exposed to ways in which their own school district has focused on energy efficiency and the environment. This innovative teaching method has created a functional learning lab for students in the midst of a fully functioning, energy efficient building model.

McKinstry's Corporate Development team and SAS have also developed a program that will help students identify jobs they are interested in pursuing, resume writing guidelines and important interviewing skills. While the K–20 program is still in its infancy and evolving, the focus revolves around how to best prepare students coming out of high school, community colleges and 4-year institutions to enter into the workforce with a company like McKinstry. Members from our executive team have joined Cascadia Community College and University of Washington Bothell to pioneer this effort.

As McKinstry continues to expand, we are exploring the creation of a combined engineering/operations hub and regional training center co-located with one of our other offices. The intent of this concept would be to establish an engineering center and operations support unit at the location with 50–100 staff to support the design and execution of projects throughout our network of locations. Linked to this hub would be an onsite training center jointly operated with local universities or colleges, operating a combination of credit curricula, technical training, co-op positions and a paid internship program distributed through our various locations. Conceptually it is envisioned that the training center would serve 50–100 participants per year, with 20 offered summer internships, 20 offered 6-month co-op positions for their junior/senior years, and ultimately 25–50 being offered full-time positions at McKinstry each year. This serves as another example of McKinstry building a pipeline for future green jobs for an energy efficient economy.

SKILLS

The design and construction industry is an economic driver in our region and, although the recent economic downturn has had a significant negative impact on growth, it is expected that the commercial sector will return to a pattern of slow growth in the fourth quarter of 2009. In addition, growth will be spurred through the investment of stimulus funds in retrofitting commercial and residential buildings for greater energy efficiency.

As the buzz about "green jobs" is growing louder every day and fueled by new Federal funding, cities, States and the Federal Government need to invest in identifying the specific skills necessary and the strategies to help people develop those skills. New and evolving green materials and techniques create knowledge and skill gaps in the current workforce.

The more technical the skill set an employee holds, the more sustainable their job is. For our workforce to succeed and maintain enduring jobs in the environment we are heading rapidly into, we believe the skill set necessary includes the following:

- Multi-design engineering;
- Value Engineering (function and use vs. true cost);
- Adeptness in sustainable construction processes;
- Familiarity on the value and principles of energy conservation;
- General knowledge on alternative energy sources;
- Technical knowledge and skills related to "green management," which includes the implementation of conservation practice processes, assessment of facilities and review of energy consumption levels;
- Technical skills (Math and Science);
- Life cycle assessment (decisionmaking function);
- Knowledge of "green business methodologies" including carbon modeling and environmental cost accounting; and
- General environmental awareness.

Demand for technically minded employees will exceed supply as the global green industry continues to grow. This disconnect will make it essential that we retool our work force to take on these emerging technologies. This will help lead the way in clean technology and the green economy while ensuring job sustainability. We need to continue to refresh the traditional trades with training in 21st century knowledge and skills.

With the need to retool our workforce in mind, McKinstry and the Workforce Development Council of Seattle-King County are currently hosting a Green Design and Green Building Skill Panel which was formed first quarter of 2008 and includes 25 leaders from business, labor, education, economic development, government, and workforce development. The panel will have an important impact on identifying and addressing the sector's workforce challenges to prepare for both the greening of the sector and future growth.

The panel's goal is to identify workforce demands in the sector and undertake initiatives that can effectively prepare the existing and future workforce to meet those needs. The panel has zeroed in on critical needs and initiatives in these three areas:

- Preparing the workforce for emerging, new green jobs;

- Up-skilling the existing workforce; and
- Integrating green knowledge across industry sectors and the building trades.

In summary, I would like to leave you with this thought as you continue to explore this issue as a committee.

Our ability to succeed as McKinstry or as any company in the green economy is directly related to the number of skilled, competent individuals who are available to perform this groundbreaking work. Without these workers—and a constant upgrading of their training and skills—our efforts will fail. We believe that without this commitment to continuing education, workforce development, and understanding the technical needs of energy efficient built environment for our country that the goal of creating sustainable, family wage, green collar jobs will fail. McKinstry is committed to that belief and has shown that commitment through our historical and continuing activities in this arena. We think it is vitally important to capture the imaginations of those just entering the workforce about the tremendous opportunity in this new, energy efficient, green economy.

We think that good policy at the Federal, State, and local level can support these goals, and that's why I'd like to thank the committee—and especially you—for your time, and I appreciate and applaud the attention and focus you've brought to this critical issue.

Senator MURRAY. Thank you very much.

Mr. Ayers.

STATEMENT OF MARK H. AYERS, PRESIDENT, BUILDING AND CONSTRUCTION TRADES DEPARTMENT, AFL–CIO, WASHINGTON, DC

Mr. AYERS. Madam Chair, members of the committee, thank you for providing me this opportunity to address you today.

Considerable attention is being directed toward green jobs and related training initiatives, jobs that will help American workers obtain secure career paths as our Nation embarks upon a transition to a more sustainable economy.

I appreciate the opportunity to offer the views of the Building and Construction Trades Department, which is a coalition of 13 national and international unions representing 2.5 million skills craftsmen and women in the United States and Canada.

I am especially pleased to serve on a panel that follows Secretary of Labor, Hilda Solis, one of the architects of the Green Jobs Act of 2007, and a tremendous advocate for America's working families.

We've all heard the projections that green jobs are expected to expand rapidly in the years ahead. The American Recovery and Reinvestment Act alone is expected to create hundreds of thousands of jobs in energy efficiency measures, smart grid development, home weatherization, building retrofits, and related areas.

I'd like to address some of these themes today, starting with a perspective on how green jobs should be defined. First, it is important to define green jobs in broad and nonrestrictive terms. Simply stated, green jobs consist of work that increases environmental sustainability and contributes to an economy that reduces emissions of greenhouse gases.

However, to assure the broadest possible economic benefits from green investments, it's critical that public policy connects green jobs with employment standards, standards that offer family-sustaining wages and benefits, and include upwardly mobile career pathways. Workers are desperate for jobs that not only provide immediate employment, but also jobs that place them on career paths, career paths that will enable them to earn better incomes as they develop higher skills and as they gain work experience.

When it comes to training, the Building and Construction Trades Department, and our member unions are not only believers in forming partnerships, we are practitioners. A central feature of the construction industry's unionized training programs is the partnership that exists between us and our contractor employers.

Finally, the Building Trades believe that new jobs created by the Greening of America should be linked to proven career pathways out of poverty and in to the middle class.

We are committed to create high-road jobs around green building retrofit activities in targeted cities around the country. And further, we hope that these initiatives that connect the demands for a less carbon-centered economy, with the potential for significant job growth, will become the centerpiece of expanded labor and community alliances. These alliances can and do ensure the placement of local residents in pre-apprenticeship and apprenticeship programs that are designed to place them on a path to a secure career in the skilled trades.

Rebuilding the American economy, the middle class, and restoring the American dream represents enormous challenges, challenges that we are prepared to embrace. Working in partnership with other progressive social forces in our society, we look forward to this challenge and we are committed to its success.

Thank you, Madam Chairwoman.

I'll be happy to answer any questions you have after everyone speaks.

[The prepared statement of Mr. Ayers follows:]

PREPARED STATEMENT OF MARK H. AYERS

Senator Murray, members of the committee, thank you for providing me this opportunity to address the committee today on the important topic of green jobs and related training initiatives that will help American workers obtain a secure career path as our Nation embarks upon a transition to a more sustainable economy.

We appreciate the opportunity to offer the views of the AFL–CIO and the Building & Construction Trades Department, which is an alliance of 13 national and international unions that represent 2.5 million skilled craft men and women in the United States and Canada. I am especially pleased to serve on a panel that follows the presentation by Secretary of Labor Hilda Solis, one of the architects of the Green Jobs Act of 2007 and a tremendous advocate for America's working families.

I speak to you today not only as the President of the Building and Construction Trades Department, but also as a veteran electrician with over 25 years in the trade, and an acute interest in what our Nation needs to do to ensure stable career opportunities for young people, as well as American workers who have been displaced from other industries.

The affiliated unions of the Building and Construction Trades Department have been at the forefront of the green jobs movement for many years. Most recently, we have joined with the AFL–CIO in launching the "Center for Green Jobs," which is designed to partner with affiliated unions to help pave the way for good jobs in a variety of current industries and emerging "green" industries. As part of this initiative our unions are engaging our apprenticeship and training programs to create the skilled workforce needed for a clean energy future and provide new opportunities to join the middle class for citizens in underserved communities, non-traditional workers, and communities of color.

Our unions have built an unsurpassed nationwide apprenticeship and training infrastructure that incorporates the latest technologies that are becoming an increasing part of everyday life on construction projects of every imaginable type. Whether it is the installation of new, high-efficiency plumbing, HVAC and electrical systems, or the use of new and improved building materials and construction techniques, America's Building Trades Unions are on the front lines of the effort to create, not just green "jobs," but "careers" that will enable Americans from all walks of life to enjoy the peace of mind associated with a stable and prosperous career that offers family-sustaining wages and benefits.

We have all heard the projections that the growth of green jobs is expected to rapidly accelerate in the years ahead. The American Recovery and Reinvestment Act alone is expected to create hundreds of thousands of jobs in energy efficiency measures, smart grid development, home weatherization, building retrofits, and related areas. The law also lays the groundwork for future investments in a lower-carbon economy that will require continued resources—both public and private—and a firm, national commitment to improving the skills and capabilities of many segments of our workforce. The potential creation of millions of green jobs represents a way to stimulate economic recovery while promoting environmental sustainability and reducing the Nation's dependence on foreign oil.

I would like to address four themes today, starting with our perspective on how green jobs should be defined. I will then talk about the importance of job quality and our experience with building partnerships with employers, educational institutions, and other organizations. I will conclude with a discussion of some of the new initiatives in which our America's Building Trades Unions are involved.

A BROAD PERSPECTIVE ON GREEN JOBS

It is important to define green jobs in broad and non-restrictive terms. Basically, green jobs consist of doing work that increases environmental sustainability and contributes to an economy that reduces the emissions of green house gasses and improves the environment. Much of the recent media attention lavished on green jobs creates the impression that green jobs are associated primarily with renewable energy production, such as the installation of solar photovoltaic panels and the construction of giant windmills. Although this work certainly falls into the category of projects that will help to reduce greenhouse gas emissions, we need to look more carefully, as a practical matter, at the presence of green jobs in many occupations and across multiple sectors of the economy.

Many of these construction projects are likely to be union jobs conducted under some type of collective bargaining agreement. They will involve construction sites, private sector manufacturing companies, public agencies, non-profit organizations, schools, and other workplaces where our members have put their skills to use for many years. When steelworkers use their expertise to manufacture blades for windmills, for example, those are green jobs. When autoworkers build hybrid electric vehicles, those are green jobs. When highly skilled construction tradesmen and apprentices install energy efficient windows in a building, upgrade the insulation around pipes, or install and maintain high efficiency boilers, those are all green jobs. More than 32,000 teamsters work in the sanitation and recycling industry across the country, working with environmentalists to reduce air and water pollutants, and conserve natural resources. Those are green jobs, too.

The expansion of green jobs is a continuous, dynamic process that occurs not only *across* many industries, but also *insid*e the jobs themselves as many are evolving to become more and more "green" as time goes on. Using this perspective, green jobs include transformed jobs that require new or upgraded skills as new processes are introduced, new technologies come on line, or government policies change to place a greater emphasis on electricity generation through zero- or low-carbon production sources.

Jobs that use existing skill sets to remediate and redevelop environmentally distressed properties, for example, have been around for decades, and thousands of our union members in the building and construction trades have worked on them. Unions have long-standing partnerships with the National Institute of Environmental Health Sciences, the NIEHS, and 18 consortia that include universities and community-based organizations. These consortia involve unions such as the operating engineers, the auto workers, the laborers, the fire fighters and many others in operating training programs for minority workers and others. Between 1988 and 2006, more than 111,000 workers were trained in the clean-up of hazardous waste. These activities contribute significantly to our Nation's environmental quality and the expansion of green jobs.

Today, all across the country, our building and construction trades State and local councils, and our affiliate local unions, are closely attuned to the demands and needs of our signatory contractors. Although the economic crisis has slowed down this process, what we are seeing is a gradually rising demand among investors for homes, commercial buildings and large projects that are more environmentally friendly and which are engineered to produce less greenhouse gas and use energy resources more efficiently. As our signatory contractors win bids for this sort of work, there will be an even greater need for apprentices and journey persons to fulfill the skilled craft manpower needs of these employers which will ultimately lead to our members gaining increased prospects for more work and additional avenues

to improve their skills and capabilities. Our education and training programs are currently structured to respond accordingly by adding new curricula and other specialized components to our existing apprenticeship training programs, for the expressed purpose of having customized training classes for our journey-level workers that meet the skilled workforce needs of owners and contractors in our industry.

In the electrical field, for example, locals of the International Brotherhood of Electrical workers, the IBEW, are involved in a wide array of work on renewable energy projects, from wind towers in Iowa to wiring solar panels in Colorado. In Oregon alone, more than 1,300 IBEW electrical workers have been training in the installation of photovoltaic panels. In San Diego, CA, where IBEW Local 569 represents more than 2,000 electrical workers, the union works with 24 contractors who install solar panels on a wide variety of buildings. The joint apprenticeship program associated with Local 569 is building toward the future, giving all apprentices some exposure to work in renewables during their 5-year program. The membership of that local is very diverse, with Hispanics comprising 40 to 50 percent.

GREEN JOBS AS GOOD QUALITY JOBS

To assure the broadest possible economic benefits from green investments, it is critical that government policy associate green jobs with high quality jobs that pay family-sustaining wages and benefits, and include upwardly mobile career pathways. Workers need jobs that not only provide immediate employment, but also place them on a career path that will enable them to earn higher wages and salaries as they gather new skills and capabilities to adjust to new technologies and the emergence of new industries. Again, the American labor movement has been at the forefront of worker training and systematic skill upgrading for generations, stretching back to the early parts of the 20th century when our unions first began to advocate for local public school systems, and for the passage of Federal vocational education initiatives. America's Building Trades Unions, invest over $700 million each year to assure that our contractor employers have access to the safest, most highly trained and highly productive workforce known to man.

Within the construction sector, joint apprenticeship programs can and should be the model upon which green jobs training is built. Registered apprenticeship programs allow workers to earn a wage while learning the skills necessary to move into not just jobs, but careers that pay family sustaining wages. The apprentice model of skill acquisition is distinctive because it integrates systematic on-the-job training, guided by an experienced master-level practitioner, with related classroom instruction. An estimated 490,000 apprentices were active in registered programs in 2003 (Glover and Bilginsoy 2005), an increase from the 283,000 enrolled in 1990 (Bilginsoy 2003).

While the U.S. Government has identified more than 800 occupations as apprenticeable, the bulk of active apprentices were being trained in 2003 as electricians, carpenters, pipe fitters and other occupations that comprise the building and construction trades. Though some programs are sponsored by non-unionized employers, the majority—70 percent—of registered apprentices participated in labor-management programs that are governed by an infrastructure of local Joint Apprenticeship and Training committees (JATC) and funded through collectively bargained contributions to local tax-exempt trust funds.

Unions and some firms have introduced innovations to maintain the relevance of apprenticeship to changing workforce and industry needs. National joint training trust funds have been established to standardize curricula, which has had the effect of increasing the uniformity of training nationwide, and encouraging local funds to offer skill upgrading for incumbent workers. Annual programs at universities are held to improve the skills of apprenticeship instructors, research industry trends, and launch apprenticeship programs for emerging occupations in, for example, energy conservation and environmental services. Dual enrollment systems have been created to enable apprentices to earn college credits and progress toward higher degrees, fostering career advancement and helping to attract more highly qualified applicants to selected fields.

In other sectors of the economy, we firmly believe that green jobs training should build on existing training infrastructure, to the extent that it exists, in order to maximize efficiencies and keep down costs. Where there are gaps in the existing training infrastructure, other existing workforce development systems that have demonstrable success should be used as a model for the delivery of green jobs training.

A number of Federal initiatives have been passed in recent years designed around green jobs and associated workforce development issues. I imagine that this will be a continuing trend in the years to come as the Nation grapples with an economy that is moving away from a traditional, high greenhouse gas emitting economy, to-

ward a model that maintains vigorous economic growth while being more eco-friendly.

In 2007, as a part of the Energy Independence and Security Act, the Congress enacted and President Bush signed into law the Green Jobs Act of 2007. More recently, the American Recovery and Reinvestment Act included $500 million to fund training activities research, labor exchange and job training projects that prepare workers for careers in the energy efficiency and renewable energy industries specified in the Green Jobs Act. This law lays a foundation upon which successful workforce development and green jobs training can be based. Such a foundation includes market research, partnerships, and workforce development programs that can place disadvantaged workers onto pathways out of poverty and into secure careers that can help build families and communities.

BUILDING PARTNERSHIPS

When it comes to training, the Building and Construction Trades Department and our member unions are not only believers in forming partnerships. We are practitioners. One of the predominant features of most of our union's training structure is the partnerships that exist between the workers and our contractor employers. Even outside the construction sector, many unionized employers rely on labor/management committees to help develop and deliver needed training to workers.

As permitted and encouraged by the Green Jobs Act, other outside partners are often included within our training structures. Partnerships with community colleges, community-based organizations, environmental groups, and others are commonplace. These existing relationships and the established training infrastructure allow for the efficient and cost effective delivery of training services. In Cleveland, OH, for example, the Painters and Allied Trades union has forged a partnership with Cuyahoga Community College to offer a number of courses to painters across the country, including "Interpreting and Bidding Green Bid Specifications."

In many trades, our building and construction unions have enduring partnerships with their management counterparts. The United Association (UA), for example, our union in the plumbing and pipefitting industry, is a founding member of the Green Mechanical Council, an alliance of manufacturers, skilled professionals, universities, and other organizations dedicated to promoting environmentally friendly equipment and processes that maximize energy efficiency, conserves water, and uses renewable and sustainable fuel sources. The "Green Mech" Council specifies the most efficient systems available for home and commercial applications across the Nation.

In March 2008, the UA unveiled a remarkable Green Training Trailer that is touring the country to introduce UA apprentices, journey-level workers, and green building expo participants to renewable energy technologies and sustainable building concepts. The 40-foot-long mobile classroom provides an overview of a number of power generating technologies, including fuel cells, wind power, and solar photovoltaic systems. Visitors to the trailer will be able to gain hands-on experience with these technologies, and take classes that lead towards a Green Awareness Certification. The UA Training Department alone spends $110 million annually on apprenticeship training, skill upgrading and other skill development activities.

Members of the Bricklayers and Allied Craftworkers (BAC) union are skilled in the practice of "sustainable masonry" that uses a variety of building materials that meet environmental specifications. The Bricklayers have had a long-standing partnership with contractors through the International Masonry Institute (IMI), a joint labor management training and production organization that has increased its focus on sustainable practices such as proper waste disposal and material recycling. The BAC and IMI develop partnerships with specific companies that produce advanced building materials that promote sustainability and create jobs for highly skilled craft workers. One such company is SEALTECH Block, which manufactures—in two U.S. facilities—construction blocks that are inherently water resistant, have a smooth texture (which reduces the need for maintenance), and contain 10 percent recycled material. SEALTECH blocks exceed environmental standards and have been certified to earn LEED points when installed in facilities. Union bricklayers are certified to install products by SEALTECH through BAC/IMI training programs. Once installed by union craft workers, SEALTECH guarantees the integrity of their product. This labor-management alliance reveals how sustainable building creates jobs for American manufacturers, benefits construction clients—such as Target stores, which has used SEALTECH products in multiple locations—and expands employment opportunities for high skill, union craft workers making family-sustaining wages.

In addition, these partnerships around green jobs are not limited to the building and construction trades. They stretch into manufacturing industries, the service and government sector, and high technology communication firms.

The International Association of Machinists and Aerospace Workers (IAM), for example, are aggressively working to create government policies and implement business practices that promote investment in the modernization of the infrastructure and the creation of new green jobs. The IAM was instrumental in the development of the Connecticut Hydrogen-Fuel Cell Coalition, a business development organization composed of representatives of the State's fuel cell and hydrogen industry, labor, academia, State agencies, and other stakeholders. At UTC Power in South Windsor, CT, IAM members in Local 1746/District 26 manufacture fuel cells for on-site power and transportation systems. At this facility, they work with scientists and engineers to build prototypes for the next generation of hydrogen fuel cells. Fuel cells from UTC Power that were built by IAM members are now being used on zero emission hybrid buses operated by Connecticut Transit and AC Transit of Oakland, CA. The 40-foot hybrid fuel cell buses have zero harmful tailpipe emissions and achieve twice the fuel economy of a regular bus.

In Washington State, for example, the Machinists union is working with Edmonds Community College to develop composite materials training programs for workers in the aerospace manufacturing industry. The college has an extensive selection of courses in Materials Science Technology, leading to a 2-year degree and the opportunity to 4-year certification in industrial engineering or technical management. These new high-tech materials are critical for reducing aircraft weight, which in turn reduces fuel consumption.

Partnerships such as these help American industries recognize new trends in technology development and deployment, along with innovative construction and production techniques which, in turn, necessitate upgrades in training programs so that workers have the appropriate skill sets that range from basic skills through advanced technical training in specific technologies.

PATHWAYS OUT OF POVERTY AND NEW INITIATIVES

The Green Jobs Act provides for grants to be made to eligible entities to carry out training that leads to economic self-sufficiency. The act directs the Secretary of Labor to give priority to entities that serve individuals in families with income of less than 200 percent of the sufficiency standard for the local areas where the training is conducted. Eligible entities for these grants include community-based nonprofit organizations, educational institutions with expertise in serving low-income adults or youth, public or private employers, and labor organizations.

Providing workers from disadvantaged communities the opportunity to move into higher to wage occupations is perhaps one of the greatest potential benefits of creating an economy that lowers greenhouse gas emissions. Sound investments into workforce development and training can help to revitalize depressed communities, restore financial security to millions of workers, while helping to create a skilled and efficient workforce for American employers.

We strongly believe that the creation of green jobs should address issues of social equity and should lead to new employment opportunities for individuals from economically distressed or disadvantaged communities. The expansion of green jobs should help those who have been disproportionately impacted by the economic crisis and have been historically excluded from the benefits of economic growth and development. Training should be provided by legitimate and established programs that lead to lifetime careers, require high levels of skills, and offer high levels of compensation to sustain families and communities. Union-based and certified apprenticeship programs, as well as new initiatives, should play a central role in meeting the workforce development demands of the economic recovery.

One of the most promising new initiatives in which we are involved is called the "Emerald Cities" Project. For the past few months, America's Building Trades Unions have been collaborating intensively on a national basis with community and green organizations to create "high-road" jobs around green building retrofit activities in targeted cities around the country.

We hope the Emerald Cities initiative will provide models for how community and labor coalitions can help green our cities while providing family-sustaining career pathways for workers from disadvantaged communities.

Further, we hope that the Emerald Cities project, as well as many other initiatives that seek to marry the demands for a less-carbon centric economy with the potential for significant job growth, will become centered upon the advantages that are inherent in Community Workforce Agreements, or as they are more commonly known—project labor agreements.

Community Workforce Agreements (CWA) are pre-hire collective bargaining agreements that establish the terms and conditions of employment on one or more construction projects.

The value of a CWA revolves around the fact that construction employers typically do not have a permanent workforce. This makes it difficult for them to predict labor costs when bidding on contracts and to ensure a steady supply of labor on contracts being performed. Challenges also arise due to the fact that construction projects typically involve multiple employers at a single location. A labor dispute, or skilled manpower shortage, involving one employer or craft can delay the entire project. A lack of coordination between and among contractors and sub-contractors, or the uncertainty about the terms and conditions of employment of various groups of workers can create frictions and disputes in the absence of an agreed-upon resolution mechanism.

From the perspective of the growth and development of green jobs, CWAs offer significant social benefits as well. In many instances, project owners and community leaders and building trades unions frequently negotiate CWAs to address a wide range of local and social needs. CWAs can, and do, ensure the hiring of local residents. Many recent CWAs are instituting community outreach efforts designed to enroll young students in pre-apprenticeship and apprenticeship programs that are designed to place them on a path to a secure career in the skilled trades. And because local workers are utilized, the project's payroll stays in the community and contributes to its prosperity.

Rebuilding the American economy and rebuilding the middle class represent enormous challenges tied to other vexing problems confronting the United States and the world, including urban poverty, growing unemployment and under-employment, environmental degradation, and the need for both energy independence and economic sustainability.

These challenges cannot be met and these problems cannot be solved without the active and enthusiastic participation of America's Building Trades Unions, working in partnership with other progressive social forces in our society.

We look forward to this challenge. We are committed to its success.

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Senator MURRAY. Thank you very much.

Joan Evans.

STATEMENT OF JOAN EVANS, DIRECTOR, WYOMING DEPARTMENT OF WORKFORCE SERVICES, CHEYENNE, WY

Ms. EVANS. Madam Chairman, members of the committee, thank you for the opportunity to be with you today, I'm Joan Evans.

The Wyoming Department of Workforce Services endeavors to enhance the skills of our job seekers, and match those individuals to employment throughout the State, relying heavily on the U.S. Department of Labor, Workforce Investment Act, and Wagner-Peyser funding to accomplish this objective. I'd like to thank Secretary Solis and the Employment Training Administration for their guidance.

The Department interacts with a variety of industries, including green industries, although these do not yet constitute a large share of the Wyoming economy. While the definition of green jobs varies widely, this testimony assumes that green jobs are primarily ones that encompass renewable energy, conservation, and energy efficiency.

The Department of Workforce Services is both proactive and reactive in determining the skills needed by industry. For example, the Department is actively pursuing a strategy that encourages

creation of partnerships involving multiple businesses within the same industrial sector. Other key players in these partnerships are local and State public entities, economic development, education and training programs. Sometimes referred to as sector solutions, these types of partnerships bring together the key workforce development players in an atmosphere that encourages collaboration, communication, and trust. The goals of these partnerships are to assess needs across the entire industry sector and then develop solutions. The final step would be to identify training or other providers to secure revenue sources to tie to those identified issues.

Through these partnerships, the Public Workforce and Education dollars are better focused to help multiple businesses within the industry sector, reducing duplication and focusing on more efficient use of our taxpayer dollars. The Department, in collaboration with our Workforce Investment Board, has determined that the healthcare and energy sector, including renewable energies, are to be the main focus of the Wyoming Industry Partnership Initiative.

The Council has set aside $400,000 in Stimulus funding from the Workforce Investment Act—15 percent set aside—to focus and support the healthcare and industry partnerships in industry and healthcare. Approximately $100,000 of that will also be used to enhance worker skills in the renewable energy industry.

The industry partnership concept drew considerable support during the 2009 legislative session and a measure was introduced that would have codified that initiative and provided State funding to support eligible partnerships. Although the measure ultimately failed, it achieved a great degree of success in educating law makers about the industry partnership concept and the potential for workforce development.

Wind energy is emerging as a key green industry in Wyoming, and our educational providers are responding. The list is long, and in light of other programs being cut at their institutions, resources are being directed toward wind technician programs, wind-solar-biomass technology training, renewable energy, energy efficiency, green electricity, green plumbing, construction, and environmental technicians.

As training providers respond, the Department's 20-plus-1 stops are able to connect job seekers with training opportunities through the Workforce Investment Act and other funding sources.

Wind energy is probably the most visible of the green industries in Wyoming, and through another tool, the Wyoming Workforce Development Training Fund, which is stocked with State dollars, we are able to help eligible businesses train new and incumbent workers. During the past year, that fund has allowed companies to access training in a variety of green practices and assist those employees in sharpening their skills.

Another entity that will significantly impact Wyoming's ability to train workers—in renewable energy, specifically—is the planned Federal Wind River Job Corps Center, and I'd like to recognize Senator Enzi's efforts to support and secure funding for this Center.

It will include a Renewable and Energy Training Center that will be a state-of-the-art facility, enabling students to acquire the skills they need to work safely in the energy industry, but also provide

reclamation training, environmental studies, renewable energy training, geology exploration, and extraction resource training. This Center will open in February 2011 and provide training to hundreds of youth while also creating over 100 permanent jobs in Wyoming.

The full potential of Wyoming's green industry currently may not be known, yet we stand ready to assist our job seekers in gaining those skills for this new economy.

Thank you.

[The prepared statement of Ms. Evans follows:]

PREPARED STATEMENT OF JOAN K. EVANS

THE WYOMING WORKFORCE SERVICES SYSTEM

The Wyoming Department of Workforce Services (Department) endeavors to enhance the skills of job seekers and match those individuals to employment opportunities throughout the State, relying primarily on U.S. Department of Labor Workforce Investment Act (WIA) and Wagner-Peyser funding to accomplish this objective. The Department consults with businesses regularly to determine workforce needs and aids job seekers in enhancing their skills to meet the needs of business.

The Department interacts with a wide variety of industries, including green industries, although these do not yet constitute a significant share of the Wyoming economy. While the definition of green jobs varies widely, this testimony assumes that green jobs are primarily ones that encompass renewable energy, conservation, and energy efficiency.

The Department of Workforce Services is both proactive and reactive in determining the skills needed by industry. For example, the Department is actively pursuing a strategy that encourages creation of partnerships involving multiple businesses within the same industrial sector. Other key players in these industry partnerships are local and State public entities encompassing workforce development, economic development and education/training programs. Sometimes referred to as "sector solutions," these types of partnerships bring together the key workforce development players in an atmosphere that encourages communication, trust and collaboration. The partnerships primary goals are to determine workforce needs across an entire industry sector, then develop solutions, such as focused recruitment and training for certain critical occupations. The final step is to identify training or other providers, and secure revenue sources to fund any identified solutions. Through these partnerships, public workforce development and education dollars are better focused to help multiple businesses within any industry sector—reducing duplicative or business-by-business efforts and increasing efficient use of taxpayer dollars.

The Department, in collaboration with the State's Workforce Investment Board—the Wyoming Workforce Development Council—has determined that the healthcare and energy sectors, including renewable energy industries, are to be the main foci of the Wyoming Industry Partnership initiative because of their direct impact on Wyoming's citizens, both in terms of their ability to impact the broader economy and directly provide necessary services for the State's 522,000 residents. The Council has set aside $400,000 in stimulus funding to support healthcare and energy industry partnerships and approximately $100,000 to encourage projects that will enhance worker skills needed in renewable energy industries.

The industry partnership concept drew considerable support during the 2009 Wyoming legislative session. A measure was introduced that would have codified the initiative and provided State funding to support eligible partnerships. Although the measure ultimately failed, it achieved a degree of success in educating lawmakers about the industry partnership concept and its potential for workforce development. The stage is set for garnering further legislative support in the next lawmaking session.

In an effort to respond more quickly to statewide workforce needs, the Department is requesting a U.S. Department of Labor waiver that would allow the University of Wyoming and the State's seven community colleges to be approved as Workforce Investment Act training providers as a whole. This request, if granted, will remove the case-by-case approval process for training programs. If the colleges implement new industry training programs, those programs will be automatically approved and eligible for WIA funding, allowing quicker reaction to business and market needs.

Because business and industry are more acutely attuned to their own markets and workforce needs, the Department will always be reactive to a degree, and remains ready to respond quickly to requests by companies to aid them in training future and existing employees. The Workforce System remains the main broker between industry and training providers.

EMERGING GREEN JOBS IN WYOMING

Wyoming has long been known not only for its pristine mountain scenery and wide-open landscapes but also for its seemingly never-ending wind. Nature's alignment of Wyoming's mountain ranges has created what are essentially wind tunnels through many of the State's canyons and over its ridge tops. These wind-swept areas are now ground zero for an emerging green industry: wind power.

The number of wind farms is growing rapidly, and Wyoming's educational institutions are trying to keep up with demand. Examples of the training programs being offered:

• Wind Technician Program—offering a variety of training options including an Associate of Science degree with a concentration of wind energy. The program has 25 students but hopes to expand enrollment to 75 by January 2010. The program makes use of the Integrated Systems Training Center, of which the Wyoming Department of Workforce Services helped to launch through a USDOL grant. The Center offers training in electrical, hydraulics, pneumatics, mechanical systems, industrial piping, HVAC and other skills.

• Wind, solar and biomass technology training that increases machinery capacity through preventative maintenance which improves the overall efficiencies of the equipment used in the oil, gas and mining fields.

• Renewable Energy Program—producing well-trained technicians through a $295,000 appropriation from the U.S. Department of Energy to support construction of a small wind generator testing and training site.

• Energy Rater Training Seminar—providing course work and test preparation for the Residential Energy Services Network Energy Rater Certification exam.

• Energy Efficient Residential Contractor Training—providing 2-day training for installation of windows, doors, and insulation for individuals interested in starting or expanding their own contracting business.

• Green Landscaping—offering a workshop on landscaping to benefit the environment and save water and energy.

• Green Electricity—providing a workshop on environmentally responsible and energy efficient electrical products.

• Green Plumbing and HVAC—offering a workshop on environmentally responsible and energy efficient plumbing products.

• Environmental Technician, Health and Safety Technician, and Construction Trades—including specific training in Energy Star Rating and Radon Testing and Mitigation.

• Construction Technology—focusing on building energy efficient residential housing using renewable resources and building science. According to Sam Rashkin, National Director of Energy Star USDOE, this program is one of only two Energy Star programs in the country.

Wind energy is probably the most visible of the green industries in Wyoming. A traveler along Interstate 80 through southern Wyoming cannot help but notice the vast arrays of wind turbines along notoriously windy stretches. Other industries are emerging as well, and are being aided by another Department program: the Workforce Development Training Fund. This fund, which is stocked with State dollars, offers grants to eligible businesses to train their workers. In the past year, the Workforce Development Training Fund has allowed companies to access training in green building practices, green certifications, energy audit training and energy efficiency training. In fact, since July 2008, the fund has awarded 10 grants totaling $17,317 for green training. The fund also provides grants to train workers in skills that are transferrable to green industries. For example, a welder or electrician can work in traditional energy fields such as oil or coal, or help build a wind turbine or new transmission lines to move wind-generated electricity.

One particular training success is the Department's Employment Training for Self-Sufficiency Program, which enhances the skills of low-income parents and improves their wage-earning potential. This program has enrolled 60 individuals in the aforementioned Integrated Systems Training Center and produced 46 graduates and an average starting hourly wage of $12.00 per hour.

Another entity that will significantly impact Wyoming's ability to train workers in renewable energy is the planned Federal Wind River Job Corps Center. After receiving roughly $3 million from the U.S. Department of Labor, the Renewable and

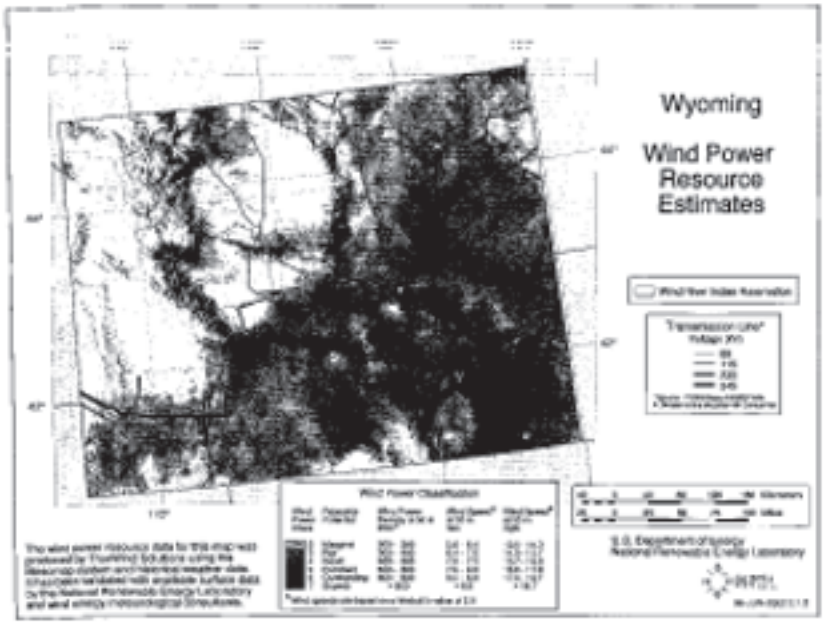
Energy Training Center at the Job Corps Center will be a state-of-the-art facility enabling students to acquire the skills they need to safely work in the energy industry. The Energy Training Center will also provide reclamation training, environmental studies, renewable energy training, geology/exploration, and extraction resources training.

The $40 million center will be completed in February 2011 and provide job training to hundreds of students aged 16 to 24 while creating roughly 120 jobs in the Riverton area. Not only will the center provide training in green industries, the facility itself will incorporate green features such as solar energy sources so students can learn first-hand the benefits that a green facility can provide and receive training on how to maintain an environmentally friendly facility.

Wyoming's traditional energy industries, such as coal, oil and natural gas, will continue to be dominant players on the State's energy landscape; however, renewable energy sources, particularly from wind, are growing. (Attachments 1, 2, 3 and 4). The Power Co. of Wyoming is moving forward with plans to build 1,000 wind turbines near Rawlins, in the southern part of the State, which will create more than 1,000 jobs. In addition, the State Board of Land Commissioners recently approved a special-use lease for a $4 billion wind farm in Converse County. Added to these initiatives, the American Recovery and Reinvestment Act offers Wyoming $10 million for weatherization projects which are being coordinated by the Wyoming Department of Family Services and will greatly enhance the ability to increase energy efficiency for low-income families. Funding is also being made available for energy efficiency work through the State Energy Office of the Wyoming Business Council.

The full potential for Wyoming's green industries currently may not be known. Yet the Wyoming Department of Workforce Services is anticipating that green jobs will have a growing and significant impact on the State's economy and is taking steps to provide trained workers for these emerging industries. By efficiently using training and support dollars, keeping the pulse on available training and collaborating with business, economic developers and training entities, the Department is preparing today's workers for tomorrow's green workforce.

ATTACHEMNT 1



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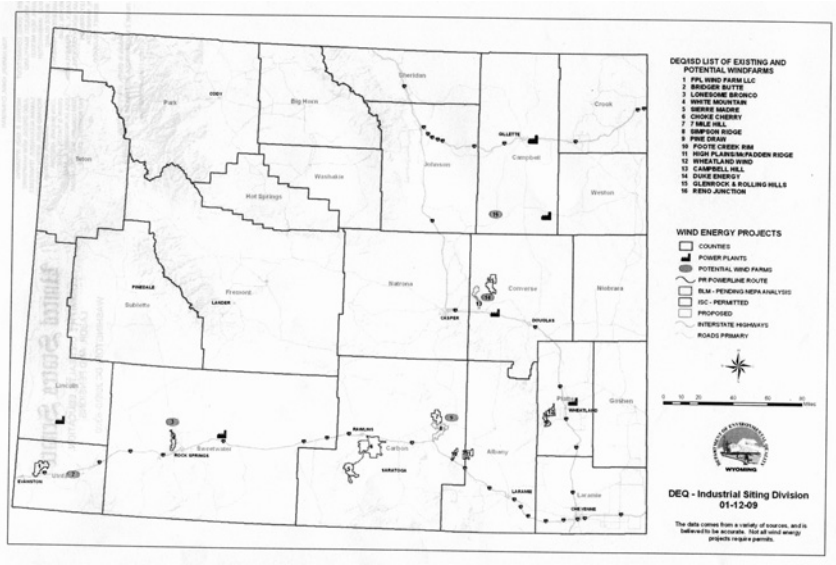

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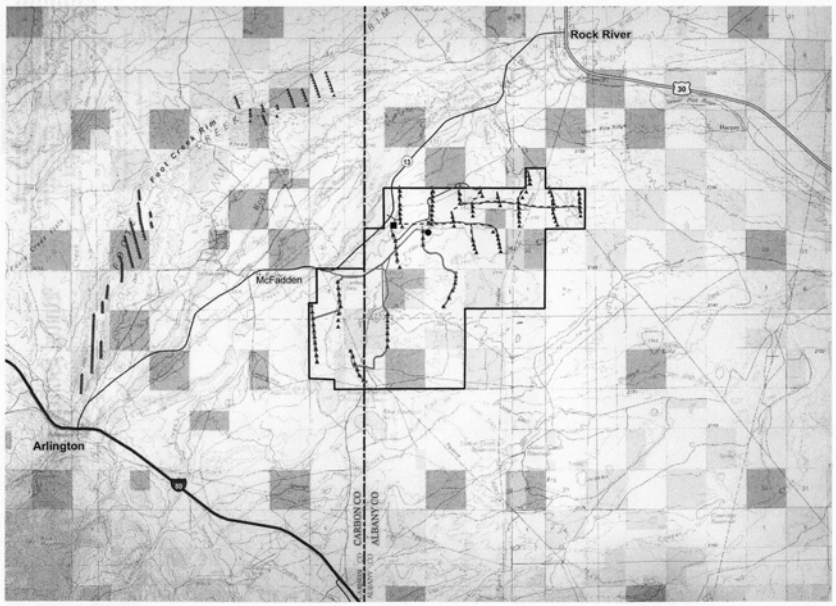

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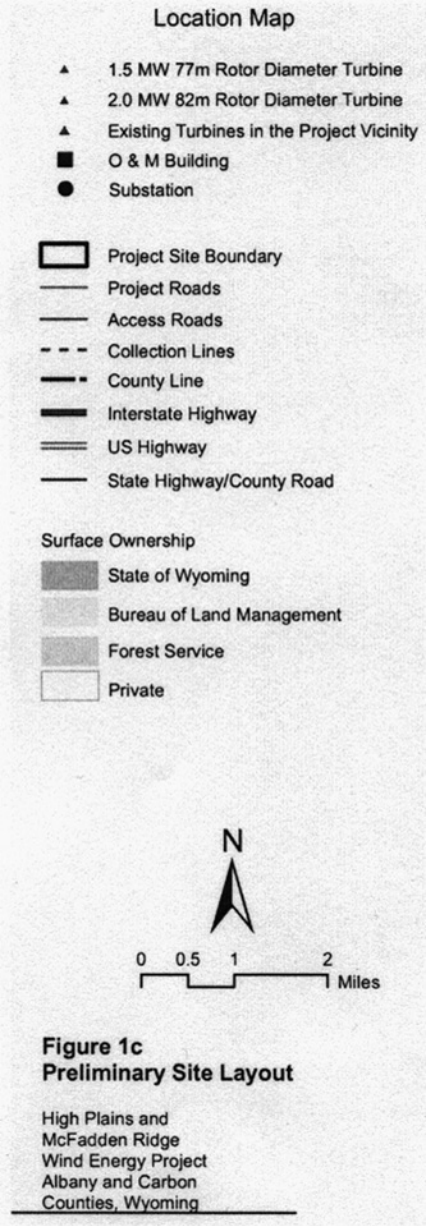
ATTACHEMNT 4



Senator MURRAY. Thank you very much to all of you for really excellent testimony.

We will now turn to some questions.

Mr. Lambert, you described how you really worked in partnership—and Joan Evans did, as well—with a lot of your communities

49360-6.eps

to develop the curriculum that was relevant to the training that you're doing. How did you work to make sure that those jobs were going to be relevant inside your own community?

Mr. LAMBERT. Madam Chair, what we do is, when we bring together the community partners, we bring that process through what we call a DACUM or Developing a Curriculum process. As part of that, we look at what are the needs out in the community for potential employment, so we're not developing a program where there isn't a place for students to land.

It's through that process, and that process focuses on other things as well. But I just wanted you to know, that's how we figure that out, it's not just the college by itself, but with its partners.

Senator MURRAY. OK, you really reach out into the community.

Mr. LAMBERT. Absolutely, absolutely.

Senator MURRAY. OK. OK.

Mr. Lou, a great success story, and it was really interesting to hear how you got to where you are today and very exciting. How did you ever learn about the solar program at Shoreline?

Mr. LOU. I was speaking with a friend about getting some training, and he mentioned that there's a link to the Shoreline Community College's photovoltaic training, and it was on a link on, I believe, solarenergy.org Web site. I tried to enroll, but I was No. 18 on the waiting list. So I waited for the next class.

Senator MURRAY. You have a long waiting list, Mr. President?

Mr. LAMBERT. Yes, we have. I mean, the enthusiasm for this program goes without saying and what Mike Nelson, our key instructor has done, he started to take more people into the class so that we wouldn't turn away the Phil Lou's of the world.

Senator MURRAY. I'm glad you didn't, because he's now creating jobs.

Mr. LAMBERT. We agree.

Senator MURRAY. Mr. Lou, as a practitioner now in the field, how do you see the long-term viability and sustainability of the energy field and the jobs that are there?

Mr. LOU. I think there's a great future for it. There's a lot of interest on Vashon Island, and because of the large number of subscribers to the Puget Sound Energy's Green Power Program, we got a grant, excuse me, Sustainable Vashon, an organization there, got a grant for two solar arrays to be installed. That is one of the three that will be installed next month.

Senator MURRAY. OK.

Mr. LOU. There's a good future and there's a lot of interest.

Senator MURRAY. Mr. Allen, let me ask you that question. We've heard some concern that jobs in the green economy won't be sustainable or competitive, in other words, not good jobs. We've heard some of that criticism. During your time in the industry, what's been your impression of the sustainability of families supporting jobs in this green economy?

Mr. ALLEN. Well, I would have a decidedly different viewpoint of that. Our professionals—our average salaries—are about the same inside the company on the professional side as they are on the installation and construction side. And, counting benefits, it's about $100,000 a year. Those would be pretty much at the top edge of

what's available on the construction side and as well on the professional side.

I think one of the things that's confusing folks—and it's not a direct answer to your question—is the difference between conservation and efficiency and renewables. Sometimes I think in the marketplace we use those together.

Conservation is primarily about changing behaviors and having products available to us that help us do that. On the other side of the spectrum are renewables, which are coming to us and certainly exciting to see them moving in the direction that they are.

I mean, we're primarily in the middle of that with energy efficiency. The energy efficiency jobs are primarily on design and engineering and the ideation side of it, and then craftsmen and craftswomen actually doing the work on the installation side, and then the maintenance and operations there after. They are all family-wage jobs or above.

Senator MURRAY. All right.

In your testimony, you talked a lot about your own investment in training your workforce. Can you talk a little bit about McKinstry's return on investment for providing training and education opportunities for your employees?

Mr. ALLEN. Well, yes, we don't actually start with a notion of a return on investment, we start with the notion that that's what companies ought to be doing for the people that they have the pleasure of employing. For our 49 years in business, it's been a people-first kind of an organization. We have had this enterprise we call McKinstry University for all the 30 years that I have been at McKinstry.

It continues to grow because the world changes faster and the economy changes faster. As we have gone from having a couple people working in energy efficiency 10 years ago to having 500 people working, we've needed to take folks that were either outside the marketplace and didn't have the skills we needed, or already working for us and moving from one part of our company to another and provide them the training they needed to take good care of our customers.

We don't think of this as something that has an ROI relative to the profits of the company, this is sort of first and front and center for the job we have to do.

With that said, we have been able to take advantage of the changes in the marketplace, and by having our staff ready and trained, it's helped us grow much faster than others.

Senator MURRAY. OK.

Senator Enzi.

Senator ENZI. Thank you, Madam Chairman. This has been fascinating and helpful.

I do remember when I went to graduate school—and that's been 40 years ago—that my most fascinating professor said, "The future is in stopping pollution." He's become more right all the time. It's interesting that we're discussing this now.

When it comes to Wyoming, we've been trying to get people to come there to get jobs. We have a little different problem than some of the other States that have huge unemployment. We have some unemployment, but it's because of a lack of skills, people not

having the training in the jobs that are available, but there's some real high-tech jobs and nontraditional jobs for women that helped close that pay gap if we could just get them trained for them.

Director Evans, I appreciate all the work that you've done in that area. In light of that, I'd ask you how the Workforce Investment Funds have been used, if at all, in Wyoming for the green skills training? What models have been adopted in Wyoming that might be useful for other people in other States?

Ms. EVANS. Senator Enzi, thank you for the question. At this time we are focusing on skill development. Our unemployment is hovering just under 4 percent statewide and we do have employers that need skilled labor, and that need is still there.

When trying to track data through our database systems, one thing that becomes clear is that we don't really have a way, yet, to separate training that we provide our job seekers with under the Workforce Investment Act, whether—to tie it directly to green skills or green jobs. That's something that, as we move forward, we may need to look at whether that will be a necessary component.

If we are providing training to a job seeker under the Workforce Investment Act for welding, is it for a regular welding job? Will they be incorporating a different skill set, and how is that training different from training we may have provided them for a different occupation? Some of that may be good to know.

We do have information, though, because of our connections with the community college system, to know that we are using their training programs to train folks that are going to work directly in wind energy, working on the wind turbines that are located in the State. Using some of those existing training programs, for one instance, at Laramie County Community College where they already had a training program for hydraulics and HVAC and those kinds of skills, they've done some adaptations that have been able to get our students and our job seekers some transferable skills into green industry, and then they're able to go out and serve those employers who are in need of those skills right now.

I'm very proud of the way that our community college system has been able to respond.

Senator ENZI. Thank you, and I'll have some more questions that I'll submit, too, so that we can build the record a little more extensively with respect to rural areas.

Mr. Allen, you mentioned that your first area of attack has been on efficiency and the second one on renewables. Is there enough marketing in that area? I know that I just found out that my furnace in the home in Wyoming, which we've owned—it's the only home we've owned—is over 30 years old, and we figured that it needed to be replaced pretty soon. We were surprised to find out that the efficiencies would pay it off. What kind of things are being done on the marketing end to drive the demand for the green jobs?

Mr. ALLEN. Well, I think we certainly are doing part in the marketing side, we're primarily on the commercial side. I know a lot of good work is being done in the Pacific Northwest by our utilities that are trying to use the direct connection they have with customers that are consuming utilities, either electrical or natural gas, with the options that are available to them.

On the commercial side, what we're mostly doing is trying to publicize our successes. We are actually currently working in the State of Wyoming, so we're glad to be there doing energy efficiency projects, but I think one of the things that we've been successful doing is sort of showing rural communities how they can make a difference.

An example project would be one where we actually worked with a sustainable forestry operation and helped them purchase a pelletizer that made wood chips from these beetle-kill projects where they are trying to harvest the timber out. They end up with a lot of scrap, they put those into pellets.

We then worked with a rural school district and converted their oil heaters for the school district to biomass boilers, signed a 10-year contract between the sustainable forestry operation and the school district, and now we have a closed loop carbon cycle all paid for on cost avoidance.

If we can get people to understand that there are solutions that are available today in the sustainable energy area, that we'll get more traction, and create more jobs.

Senator ENZI. Thank you. Your response reminds me I have an inventors conference this weekend, and my youngest inventor was an 8-year-old who figured out to take tumbleweeds and make those into those pressed chips as well, and they can be recycled.

I have questions for the rest of you, but my time has expired. I will be asking some questions about how much flexibility there is with green jobs so that when we reauthorize the Workforce Investment Act we can match up what we're trying to do with the larger workforce system.

Thank you, Madam Chairman.

Senator MURRAY. Senator Enzi, unless you have any additional questions to the panel, we have run out of time.

I want to thank everyone who has testified today, excellent testimony. We will have some written questions from some of the Senators who were not able to make the hearing, and we would request that you respond back to those in a timely fashion.

This has been especially helpful to our committee as we work toward reauthorizing the WIA Act and making sure that the Economic Recovery dollars are spent in a way that actually really provides great training for young people out there.

Thank you very much to all of you.

For any members who want to submit a statement for the record, the hearing record will be open for 7 days.

And with that, this hearing is adjourned.

Thank you very much.

[Additional material follows.]

ADDITIONAL MATERIAL

PREPARED STATEMENT OF SENATOR KENNEDY

I join in welcoming Secretary Solis to today's hearing, and I wish I could be there in person. I look forward very much to her testimony on the Department of Labor's plan to create jobs and provide job training to those seeking employment in the rapidly developing green sectors of our economy, so that our workers can develop the education and employment skills they need to enter the green workforce, earn family-sustaining wages, and move up the career ladder.

As Robert Pollin of the University of Massachusetts-Amherst said of the Recovery and Reinvestment Act's $70 billion funding of green initiatives, "It's the first time the notion that investment in a clean-energy economy is connected officially in government policy with the idea of job creation." Let's work together to see that it is not the last time this important connection is made.

We currently face large challenges on the economy and the environment—a severe recession with rising unemployment, unacceptable high school dropout rates, an increasingly competitive global economy, and an ever more pressing call to protect the environment. We also, however, have large opportunities, thanks to the leadership of President Obama and the enduring spirit of American workers. By wisely investing in green job training, we can prepare Americans for steady jobs, develop needed new technologies, reassert our pre-eminent position in the global economy, and significantly reduce the growing danger to the environment.

Green jobs can improve our Nation's economy and environment and strengthen America's middle class.

- The American Solar Energy Society reports that in 2007, renewable energy and energy efficiency technologies "generated more than 9 million jobs, more than $1 trillion in revenues, and nearly $105 billion in Federal, State, and local tax revenues." Revenues in these industries surpassed the combined sales of Wal-Mart, ExxonMobil, and General Motors, which totaled $905 billion that year.
- The work performed in green jobs reduces consumers' electric and water bills, and reduces our dependency on foreign oil.
- Green jobs are less likely to be outsourced, and pay 10 to 20 percent more than other jobs.

Green industry sectors have strong potential for future growth as well. Under the Energy Independence and Security Act of 2007, the United States must produce 36 billion gallons of renewable fuels, such as ethanol, by 2022. The development of solar photovoltaics, just one part of the solar energy industry, is estimated to grow from a $20 billion industry in 2007 to $74 billion by 2017. Wind energy, the fastest-growing form of energy generation, is expanding by 30 percent to 40 percent every year. We obviously now have a unique opportunity to empower many more workers, young and old, to protect the environment, boost the economy, and increase individual self-sufficiency. It's an opportunity we can't afford to miss.

We know that economic expansion cannot take place without a well-trained workforce. It's essential that we provide the necessary resources to give workers the access to the training they'll need for

jobs in green industries. Such training is especially important for the many men and women who are suffering the most today from the economic crisis.

Our witnesses on today's second panel will tell us much more about which skills should be cultivated, which programs should be encouraged, and how partnerships between government, business, organized labor, and education can benefit everyone involved. In particular, I look forward to hearing more from President Ayers of the Building Trades, who has been an important leader in developing partnerships to provide skill-building opportunities and good middle-class jobs for employees in green industries. It's essential to identify the specific skills that can contribute most to success in green careers. Opportunities are increasingly available at all levels of such careers, from management and consulting to boots-on-the-ground green collar jobs.

The timing has never been better for a new commitment to workforce development and the environment. I look forward to working with my colleagues and the Administration to use the talents and develop the skills of our workers to get our economy back on track now and ensure a prosperous, greener future for our children.

PREPARED STATEMENT OF ASSOCIATED BUILDERS AND CONTRACTORS (ABC)

Associated Builders and Contractors (ABC) appreciates the opportunity to submit the following statement for the official record.

We would like to thank the Committee Chairman, Edward Kennedy and Ranking Member Michael Enzi, as well as the members of the Senate Committee on Health, Education, Labor, and Pensions for holding today's hearing entitled "Empowering Workers to Rebuild America's Economy and Longer-Term Competitiveness: Green Skills Training for Workers."

ABC is a national construction industry trade association representing more than 25,000 merit shop contractors, subcontractors, materials suppliers and construction-related firms within a network of 79 chapters throughout the United States and Guam. ABC member contractors employ more than 2.5 million skilled construction workers, whose training, skills, and experience span all of the 20-plus skilled trades that comprise the construction industry. Moreover, the vast majority of our contractor members are classified as small businesses. Our diverse membership is bound by a shared commitment to the merit shop philosophy in the construction industry. This philosophy is based on the principles of full and open competition unfettered by the Government, nondiscrimination based on labor affiliation, and the award of construction contracts to the lowest responsible bidder through open and competitive bidding. This process assures that taxpayers and consumers will receive the most for their construction dollar.

ABC member companies have been at the forefront of green construction since before this terminology came into fashion. In fact, ABC has been at the forefront of the green building movement since its inception. ABC member SIGAL Construction was a founding member of the U.S. Green Building Council (USGBC) as well as one of the authors of the Leadership in Energy and Environmental Design (LEED) rating system. ABC members continue leading the construction industry by utilizing sustainable construction methods and practices. According to Engineering News-Record in 2008, 53 of the Top 100 Green Contractors were ABC members generating close to $15 billion in revenue with more than 2,800 LEED Accredited Professionals (APs) on staff. (Attachment)

ABC chapters and member companies are actively engaged in training workers in a wide variety of skilled occupations and are constantly striving to keep pace with technology and innovation in order to make certain America has the skilled workforce it deserves, and that all American workers, regardless of union affiliation, enjoy equal opportunity of access to critical job training. However, the continued participation of open shop contractors, and the job opportunities for over 84 percent of the construction workforce they employ, in the booming green building market is threatened by the efforts of many in Washington, DC to exclude non-union companies and training providers from participating in new government-funded green jobs training programs.

The Green Jobs Act, enacted as part of the "Energy Independence and Security Act of 2007" which was signed into law in December 2007, establishes National Energy Training Partnership Grants to fund training programs targeted at creating an efficient energy and renewable energy skilled workforce. Specifically, the Green Jobs Act would require any entity applying for these grants to partner with organized labor. The reality is that this language would bar the numerous open shop training programs from receiving this grant funding.

Organized labor makes up just 15.6 percent of the private construction workforce and likely represents a similar amount of work in the green building market. Given the desire to see a continued increase in the use of green building and green technology, it seems that limiting the ability to participate in green training to such a small percentage of the construction industry would make this growth difficult. If the green building market is going to continue to expand in the coming years as some groups predict, the participation of the open shop will be a crucial factor in ensuring there are enough skilled workers to meet the demand.

To that end, ABC, along with many other construction and business groups, strongly supports the "Green Jobs Improvement Act" soon to be introduced in the U.S. House of Representatives by Congressman John Kline which would amend the Workforce Investment Act to allow both union and open shop training providers access to the federally funded energy efficiency and renewable energy worker training programs. This bill would give all workers the opportunity to train in the ever increasing field of green construction and would not block certain training providers access simply because they choose not to be affiliated with organized labor.

The advances in the technology and skill involved in green building, and the benefits of their use, is indeed a welcome trend for contractors, skilled workers and the end user. It is our view that the most efficient path to encouraging this continued growth of this sector is by giving all training providers, regardless of union affiliation, access to Federal training programs so that the greatest numbers of workers can be trained in green jobs. In today's tough economic times, especially in the construction industry, Members of Congress have a responsibility to provide all workers with training opportunities paid for by their tax dollars.

Again, thank you for your work, and we look forward to your continued efforts to promote green building opportunities for *all* contractors.

ATTACHMENT

According to Engineering News-Record in 2008, 53 of the Top 100 Green Contractors were ABC members generating close to $15 billion in revenue with more than 2,800 LEED APs on staff. *http://enr.construction.com/people/topLists/GreenCont/topGreenCont_1-50.asp.*

Rank	Firm	APs	07 Green Rev	
2008	ABC members highlighted	On staff	$ MIL	% REV
1	The Turner Corp., New York, NY	429	1,805.05	19
2	Webcor Builders, San Mateo, CA.			
3	Skanska USA Inc., Whitestone, NY	164	1,242.34	22
4	Bovis Lend Lease, New York, NY	201	1,075.5	20
5	Swinerton Inc., San Francisco, CA	195	1,046	52
6	PCL Construction Enterprises Inc., Denver, CO	18	936.71	19
7	Clark Group, Bethesda, MD	85	752.97	18
8	Hensel Phelps Construction Co., Greeley, CO	68	747.68	30
9	Gilbane Building Co., Providence, RI	186	651.87	22
10	The Haskell Co., Jacksonville, FL	17	562	79
11	Hunt Construction Group Inc., Scottsdale, AZ	25	527.32	26
12	L.F. Driscoll Co., Bala Cynwyd, PA.			
13	Hoffman Corp., Portland, OR.			
14	The Whiting-Turner Contracting Co., Baltimore, MD.			
15	Sundt Construction Inc., Tempe, AZ	74	440.3	49
16	Clayco Inc., St. Louis, MO.			
17	The Weitz Co. LLC, Des Moines, IA	58	349.33	22
18	Austin Industries, Dallas, TX	47	345.9	2
19	David E. Harvey Builders Inc., Houston, TX	13	337	47
20	Holder Construction Co., Atlanta, GA.			
21	Balfour Beatty Construction, Dallas, TX	50	273.58	12
22	The Facility Group, Smyrna, GA.			

Rank	Firm	APs	07 Green Rev	
2008	ABC members highlighted	On staff	$ MIL	% REV
23	B.L. Harbert International LLC, Birmingham, AL	5	267.1	63
24	JE Dunn Construction Group, Kansas City, MO	133	266.5	10
25	William A. Berry & Son Inc., Danvers, MA.			
26	Caddell Construction Co. Inc., Montgomery, AL	4	256.54	74
27	Structure Tone, New York, NY	140	248.43	7
28	Opus Group, Minnetonka, MN	92	225.3	12
29	FTR International Inc., Irvine, CA.			
30	Stellar, Jacksonville, FL	25	199.9	36
31	HITT Contracting Inc., Fairfax, VA	17	199.04	22
32	James G. Davis Construction Corp., Rockville, MD.			
33	Pepper Construction Group, Chicago, IL.			
34	M.A. Mortenson Co., Minneapolis, MN.			
35	Suffolk Construction Co. Inc., Boston, MA	56	170.06	15
36	DPR Construction Inc., Redwood City, CA	211	167.22	11
37	Linbeck, Houston, TX.			
38	Hathaway Dinwiddie Construction, San Francisco, CA.			
39	Messer Construction, Cincinnati, OH	11	146.5	22
40	TLT Construction Corp., Wakefield, MA.			
41	The Walsh Group, Portland, OR	20	136.5	52
42	The Walsh Group Ltd., Chicago, IL	44	135.47	4
43	Barton Malow Co., Southfield, MI	40	133.24	9
44	Okland Construction Co. Inc., Salt Lake City, UT.			
45	McCarthy Holdings Inc., St. Louis, MO.			
46	Power Construction Co. LLC, Schaumburg, IL.			
47	Andersen Construction Co., Portland, OR.			
48	Duke Construction, Indianapolis, IN.			
49	Grunley Construction Co. Inc., Rockville, MD	9	109.06	41
50	Lauth Construction Group LLC, Indianapolis, IN.			
51	Cox & Schepp Construction Inc., Charlotte, NC	8	105	50
52	Barnhart Inc., San Diego, CA.			
53	Saunders Construction Inc., Centennial, CO.			
54	Ryan Cos. US Inc., Minneapolis, MN	47	101.25	10
55	Pioneer General Contractors, Grand Rapids, MI.			
56	Sellen Construction Co. Inc., Seattle, WA.			
57	Bernards, San Fernando, CA.			
58	BE&K Inc., Birmingham, AL	22	79.48	5
59	Kraus-Anderson Construction Co., Minneapolis, MN.			
60	Lusardi Construction Co., San Marcos, CA	0	77	25
61	Consigli Construction Co. Inc., Milford, MA.			
62	The Yates Cos. Inc., Philadelphia, MS	25	75.2	4
63	C.W. Driver, Pasadena, CA	18	75.01	13
64	Hall Building Corp., Farmingdale, NJ.			
65	New South Construction Co., Atlanta, GA	7	73.8	47
66	McGough Construction, St. Paul, MN.			
67	Mascaro Construction Co. LP, Pittsburgh, PA.			
68	Forrester Construction Co., Rockville, MD	40	70	26
69	Lease Crutcher Lewis, Seattle, WA.			
70	Reno Contracting Inc., San Diego, CA	11	66.16	30
71	Rockford Construction Co., Grand Rapids, MI	6	63.73	18
72	The Boldt Co., Appleton, WI.			
73	P.J. Dick-Trumbull-Lindy, West Miflin, PA.			
74	Shawmut Design and Construction, Boston, MA.			
75	The Korte Co., Highland, IL.			
76	Brasfield & Gorrie LLC, Birmingham, AL	7	49.72	2
77	O & G Industries Inc., Torrington, CT.			
78	INTECH Construction Inc., Philadelphia, PA.			
79	CORE Construction Group, Morton, IL	20	48.4	9
80	Manhattan Construction Co., Tulsa, OK	15	43.7	4
81	Continental Building Systems, Columbus, OH.			
82	XL Construction Corp., Milpitas, CA.			
83	Workstage, Grand Rapids, MI.			
84	Adolfson & Peterson Constr., Minneapolis, MN	48	40.4	5
85	Butz Enterprises Inc., Allentown, PA.			

Rank	Firm	APs	07 Green Rev	
2008	ABC members highlighted	On staff	$ MIL	% REV
86	JM Olson Corp., St. Clair Shores, MI.			
87	Davis Constructors & Engineers Inc., Anchorage, AK.			
88	IMC Construction, Malvern, PA.			
89	Hoar Construction LLC, Birmingham, AL	15	35.4	7
90	Nabholz Construction Corp., Conway, AZ	10	34.2	8
91	Tarlton Corp., St. Louis, MO.			
92	Harper Construction Co. Inc., San Diego, CA	5	31.6	23
93	Creative Contractors Inc., Clearwater, FL	4	31.12	
94	F.A. Wilhelm Construction Co. Inc., Indianapolis, IN.			
95	Moss & Associates LLC, Fort Lauderdale, FL	26	28.9	4
96	Coakley & Williams Construction, Gaithersburg, MD	8	24.5	9
97	Elkins Constructors Inc., Jacksonville, FL	6	20.87	9
98	Weis Builders Inc., Minneapolis, MN	15	20.79	4
99	Sahara Inc., West Bountiful, UT	4	20.6	23
100	Gray Construction, Lexington, KY	5	19.46	4
		2809	***$14,990,700,000***	

PREPARED STATEMENT OF THE INDEPENDENT ELECTRICAL CONTRACTORS (IEC)

The Independent Electrical Contractors (IEC) and its 2,700 electrical contractor members would like to thank the committee for holding today's hearing on "Empowering Workers to Rebuild America's Economy and Longer-Term Competitiveness: Green Training for Workers."

Through its Department of Labor-certified, chapter-based training programs, IEC trains thousands of apprentice electricians every year, along with providing continuing education for contractors and journeymen, while constantly striving to keep pace with technology and innovation in order to make certain America has the skilled workforce it deserves and that all American workers, regardless of union affiliation, enjoy equal opportunity of access to critical job training.

IEC strongly supports the concept of green jobs training in order to meet the growing demand within the marketplace and have been adapting their training methods to prepare workers for this ever-expanding segment of the construction industry.

However, the continued participation of IEC members and all merit shop contractors, and the job opportunities for 84 percent of the construction workforce they employ, is threatened by the requirements contained within the Green Jobs Act (Title X of P.L. 110–140).

The Green Jobs Act establishes training grants to fund training programs targeted at creating an efficient energy and renewable energy-skilled workforce. Specifically, the Green Jobs Act would require any entity wanting to apply for these grants to partner with a labor organization in order to be eligible for funding. The reality is that this language would bar the numerous merit shop training programs from receiving this grant funding.

The title of this hearing is "Green Building Training for Workers". It is important to note that no reference to the union affiliation of the workers being trained is part of the committee's hearing nor should it be. Open competition between all segments of the construction industry is the surest way to obtain both cost efficiency and high quality work product. Limiting the ability to participate in green training to the 16 percent of the workforce that belongs to a labor union would make the continued expansion of the green market, which some predict to double in coming years, extremely difficult.

Also, by limiting the ability of a vast majority of the construction workforce to participate in green job training, the Green Jobs Act will increase the costs of constructing new green building by limiting the competition for the contracts.

There is also a concern that the merit shop construction industry may be further deprived of an equal opportunity to participate in the green building market, should the Federal Government apply the requirements of the Green Jobs Act to "green" government contracts, thus limiting those contracts to companies that train their workers in programs aligned with organized labor.

IEC encourages this committee to support passage of the *Green Jobs Improvement Act* (H.R. 2026), which would promote open competition for these Federal funds by removing the restrictive mandate that a training program partner with a labor order to be eligible for a taxpayer funded program.

Again, I would like to thank the committee for accepting IEC's statement for the record as part of this hearing. IEC will continue to provide our members and their valued employees with the skill-set and education necessary to meet the demands of the green building market, and we remain hopeful that our federally recognized training programs will be given the opportunity to compete for these new grants.

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA (AGC),
ARLINGTON, VA 22201–3308,
April 20, 2009.

Hon. EDWARD M. KENNEDY, *Chairman,*
Committee on Health, Education, Labor, and Pensions,
U.S. Senate,
Washington, DC 20510.

Hon. Michael B. Enzi, *Ranking Member,*
Committee on Health, Education, Labor, and Pensions,
U.S . Senate,
Washington, DC 20510.

DEAR CHAIRMAN KENNEDY AND RANKING MEMBER ENZI: The Associated General Contractors of America believes that "green jobs" will play an important role in the Nation's economic recovery because many green jobs, both in the energy-efficiency and renewable-energy sectors, are traditional construction jobs that pay well, offer opportunities for advancement, are accessible to minorities, and cannot be outsourced overseas. However, our nationwide association of 33,000 firms working in the commercial construction industry is concerned about the Federal Government's efforts to direct money to train workers for "green jobs" without a universally accepted definition of a "green job."

If one defines a "green job" as: "Jobs that have a direct, positive impact on the environment"—as did the Washington State Employment Security Department in a January 2009 report—then a laborer, electrician, mason, construction manager, heavy equipment operator, supervisor, carpenter, painter, or any other construction worker helping to retrofit an existing building, construct a new green building, or perform some other traditional construction task necessary to build and connect a renewable energy source to the Nation's power grid—such as erecting a windmill or installing solar panels—is a "green collar" worker.

The U.S. Office of Management and Budget (OMB), in its recent update of the standard occupational classification (SOC) system, "analyzed over 80 unique suggestions regarding 'green' occupations," rejecting all but two—wind turbine service technician and solar photovoltaic installer. In explaining its final decision in the January 21, 2009 Federal Register, OMB noted: "In many cases, the work performed in the 'green' job was identical or similar to work performed in existing SOC occupations."

The recent report: "U.S. Metro Economies: Green Jobs in U.S. Metro Areas," prepared for the U.S. Conference of Mayors and the Mayors' Climate Protection Center, noted:

> "We should not expect to see a new industry populated by a new breed of 'green construction workers.' As green building technology becomes increasingly popular . . . traditional contractors will develop their skill sets and expand their knowledge bases in ways that will allow them to transform large numbers of ordinary buildings into some of the most energy efficient in the world."

The Washington state report added: "Green jobs are not necessarily new jobs, but often traditional jobs in industries and companies that are adapting to new markets and opportunities."

Economic Modeling Specialists Inc.'s report issued December 2008 weighed in with:

> "The consensus among those economists who address these issues is that the designation 'green' turns not on the specific task associated with an occupation, but rather on the specific outcome of the occupational effort."

Given these definitions of "green jobs," it is easy to see why AGC and its member companies are concerned that a disproportionate amount of the American Recovery and Reinvestment Act training funds will be spent on training workers for jobs in nascent "green" sectors, when a much larger proportion of "green jobs" are being held by workers in traditional construction jobs—workers who would *benefit by*, but do not *need*, training in green practices in order to work successfully on a green project.

For instance, the transportation sector—defined as the movement of goods and people from one place to another—accounts for 27 percent of the Nation's total energy consumption and 31 percent of man-made carbon dioxide (CO_2) emissions. Contractors (and the subcontractors who work with them) not only reduce transportation congestion—a major source of both wasted energy and CO_2 emissions—through expansion and improvements to roadways, airports, railways, waterway systems, and the construction of mass transit options, they also are recycling at the highest levels in the Nation.

According to a recent Environmental Protection Agency report, structural steel is recovered at 97.5 percent and reinforcement steel at 65 percent, together equaling 40 million tons of material recycled and 71.6 million metric tons CO_2 emissions avoided. The recovery rate for asphalt is 80 percent, which equals 139 million tons recycled and 4.17 million metric tons CO_2 emissions avoided. Concrete is estimated at 1.4 million metric tons CO_2 of annual emissions avoided through recycling. (Note: EPA did not calculate the percentage of concrete recovered.)

Construction contractors also improve the environment through habitat restoration; wetlands mitigation; brownfields cleanup and redevelopment; the cleanup of Superfund sites; and construction of and upgrades to wastewater treatment plants and drinking water facilities.

According to EPA, construction equipment and energy use contributed only an estimated 1.7 percent of total U.S. greenhouse gas emissions during 2002 (the latest year for which statistics are available). Meanwhile, according to the U.S. Bureau of Labor Statistics (BLS), construction is one of the Nation's largest industries, with 7.7 million wage and salary jobs and 1.9 million self-employed workers, and approximately 883,000 construction establishments in the United States in 2006.

Recycling, improving our Nation's infrastructure, rehabilitating toxic land sites—construction has been at the forefront of all of these efforts for years, without very much special "green" training. Nevertheless, AGC contends that the workers on all of these projects, and more, are "green collar" workers who deserve the very best training.

AGC also is concerned that when the energy-efficiency sector is discussed, the construction of new, energy-efficient buildings is excluded. In recent reports and, indeed, in testimony before this subcommittee, the energy-efficiency sector is described as primarily concerned with the retrofitting of existing buildings, with no mention of all the jobs created, and savings incurred, from the construction of new buildings using green technology. The mayors' report, which focused on "current and potential green jobs in the U.S. economy," failed entirely to address the jobs created as a result of new green buildings.

"Building green is one of the best strategies for meeting the challenge of climate change because technology to make substantial reductions in energy and CO_2 emissions already exists. In comparison to the national building stock, the average LEED® certified building uses 24 percent less electricity and saves 13.86 million metric tons of CO_2 emissions annually," according to the New Buildings Institute. Since the commercial and residential building sector accounts for 39 percent of the CO_2 emissions in the United States each year, more than any other sector according to the Environmental Information Administration, a new certified "green building" certainly qualifies as "green," as do the workers building it.

Green building rating systems—of which LEED® is one of several—take into account incorporation of efficient heating, ventilation, and air conditioning systems, use of state-of-the-art lighting and daylight, reduction of potable water, use of renewable energy, implementation of proper construction waste management, proximity to public transportation, and use of locally produced building products. Green buildings are designed to conserve raw materials, use less energy, and use renewable energy sources.

According to a McGraw-Hill report, "Green Outlook 2009: Trends Driving Change," the value of green building construction starts has risen from $10 billion in 2005 to an estimated range of $36 billion to $49 billion in 2008. Further, the report said the value could hit $140 billion by 2013. While there is no hard data on the numbers of workers needed to build all those buildings, suffice to say it reaches into the tens, perhaps hundreds, of thousands.

As an example, the Washington Nationals Park, the Nation's first major professional stadium to become LEED® Silver Certified by the U.S. Green Building Council (USGBC), cost more than $600 million and employed more than 1,000 workers during the 26 months it took to build. Keep in mind: that one project constituted just over 1 percent of the total spent on new green building starts in 2008.

When it comes to renewable energy, construction is at the forefront of these efforts. While it is true that there are some new types of installers and technicians needed to connect renewable energy sources to our Nation's power grid, it is also

true that the bulk of the work is performed by traditional construction workers, such as the paving crews, cement masons, heavy equipment and crane operators, and others who prepare the site, roads and foundations needed before a windmill can be erected.

Where needed, of course, AGC is in favor of green training and, to that end, has worked extensively to provide our members with basic and advanced curricula to further their understanding of their role in the green construction process. Among AGC of America's numerous green offerings:

• The LEED® Estimating for Green Building Course, introduced in 2007. To date, nearly 400 people have taken the class.

• The Building to LEED® for New Construction full-day course. Since its rollout in March 2008, 17 AGC chapters across the Nation have held the course, with nearly 750 people successfully completing it.

• The Contractor's Guide to Green Building Construction LEED® and Building to LEED®—NC books.

• AGC has offered numerous green construction sessions at our annual meetings, and we have teamed up with both the USGBC and the Green Building Initiative to offer training.

• Our 90th Annual Convention, held in March 2009, offered eight green building sessions for attendees and a special green section in the exhibit hall.

• Articles, fact sheets, webinars, an environmental network, and an extensive cache of online resources all geared toward contractors working in a green economy.

Our craft training partner, the National Center for Construction Education and Research, introduced a green module in spring 2008 called "Your Role in the Green Environment." The module is designed for entry-level craft workers or for anyone wishing to learn more about green building. The module is currently being used by construction industry-sponsored training programs, community colleges, and high schools around the Nation. Additionally, for AGC members whose craftsworkers are unionized, there are joint labor-management training programs, including those offered through the International Brotherhood of Carpenters and Joiners, and the Laborers-AGC, among others, that provide green training.

AGC provides tools, such as our Supervisory Training and Project Manager Development Programs, for our members to provide a pathway for their employees to advance to positions of greater responsibility. Both of these programs include information on the knowledge and practices of green construction.

In 2003, AGC and the Federal Environmental Protection Agency formed the AGC–EPA Sector Strategies partnership, focused on: improving environmental regulations, expanding the use of environmental management systems, and exploring ways to assess environmental progress. We value our partnership with EPA and other Federal partners and have two staff members devoted to environmental concerns, including a Director of Green Construction, whose job is to work with the industry—both internally and externally—to promote best practices in green construction and environmental management.

AGC recently began a new partnership with EPA and the Industrial Resources Council to facilitate the recycling and the environmentally safe reuse of non-hazardous industrial materials as part of EPA's national Resource Conservation Challenge. It is anticipated that the group's joint efforts to provide leadership, technical expertise, and assistance will increase the amount of materials recycled or reused each year—resulting in cost savings; beneficial impacts to the environment, including a reduction in greenhouse gas emissions; stimulation of local markets; and a reduction in the use of landfills.

In addition, AGC has implemented an environmental agenda that includes:

1. Encouraging environmental stewardship among AGC members through education, awareness, and outreach;
2. Recognizing environmentally responsible construction practices;
3. Strengthening government support for positive incentives for environmental excellence;
4. Facilitating members' efforts to recycle or reduce construction and demolition debris;
5. Identifying and maximizing the contractor's role in "green" construction; and
6. Identifying ways to measure and report environmental trends and performance indicators of such trends.

As you can see, AGC of America, our member firms, and their employees take our role in the green economy very seriously, both in educating our current workforce and in preparing the next generation to build green.

While AGC understands the interest in tying green to the definition of "green jobs" to good-paying jobs that allow a worker to support a family, we would prefer a definition that does not advocate a particular labor posture.

According to the BLS, "Earnings in construction are higher than the average for all industries." A report prepared by FMI for AGC of America found that the nonresidential construction craftworker earned $19.83 an hour in 2007, compared to $18.52/hour for a craft-level worker in natural resources, $17.17/hour in manufacturing, and $15.78/hour in trade (transportation, distribution, retail, and logistics).

Those good-paying craft jobs have the potential to turn into entrepreneurial ventures: "Opportunities for workers to form their own firms are better in construction than in many other industries," according to the BLS.

As noted above, AGC members work in both the open shop and union sectors and we are advocating investment in training programs for all construction industry workers. Since only 13.9 percent of the Nation's construction workforce is unionized, according to the BLS data on 2007 employment, and since AGC believes that an increasing number of construction jobs are "green jobs," there is no reason to tie "green jobs" to "union jobs," which would leave out more than four-fifths of the eligible construction labor force from the "green" designation.

With regard to how the Federal Government can support greener construction practices, AGC recommends changes to the Energy Independence and Security Act of 2007, which includes plans to establish an energy and renewable energy worker training program through a provision known as the Green Jobs Act. AGC is hoping to see some changes prior to any grant solicitations under this program. The Green Jobs Act, as currently written, would limit training grant funding to entities that coordinate with labor organizations. AGC is supportive of the grant program as part of an effort to create an efficient and renewable energy skilled workforce. However, it is our belief that the opportunity to apply for such grants should be open to all contractors, both union and open shop, that have accredited training programs.

In the 110th Congress, a bill was introduced on the House side that would open up the Green Jobs Act to allow any accredited training program, regardless of labor posture, to compete for grants under the Green Jobs Act. AGC supported this bill and expects the same bill to be reintroduced soon in the 111th Congress.

As for a definition of "green jobs" as those that are available to "diverse workers from across the spectrum of race, gender, and ethnicity," as included in the U.N. Environmental Programme, Labour and the Environment Unit's definition, we would point to the growing number of Hispanics in the construction industry and the efforts of industry to reach out to non-traditional labor pools, including minorities, females, and veterans.

Hispanics increasingly have found work in construction; accounting for 25 percent of the total employed in construction nationwide and the numbers are growing. The Pew Hispanic Center said two of every three new construction jobs in 2006 were filled by a Hispanic worker.

Among the AGC's most recent initiatives to inform minorities and females about career opportunities in construction and to develop the workforce needed to rebuild the Nation's crumbling infrastructure, are partnerships with the Boys & Girls Clubs of America and the Girl Scouts of America. Our members and chapters have provided thousands of youths active in these two programs with donated Build Up! educational kits that introduce them to the importance of the construction industry to our Nation, as well as their future possible role in helping to build the Nation's infrastructure. Additionally, many AGC chapters and members have made substantial commitments to construction career academies and charter schools, such as AGC of St. Louis's success with the Construction Careers Center in St. Louis, MO., and AGC of Metropolitan Washington, DC's financial and intellectual support of the new Phelps Architecture, Construction and Engineering Academy in Washington, DC, both of which serve a largely African-American population. These are only a few outreach efforts among hundreds in which AGC members and chapters nationwide play a substantive, often leading, role.

In summary, AGC of America believes that training funds spent on traditional construction industry apprenticeship and training programs—in both the union and open shop sectors—constitute one of the Nation's most cost-effective and beneficial routes to increasing the number of green collar workers in America and we look forward to helping the Nation's economy rebound, become greener, and regain its prominence in the world economy.

By building energy efficiency into existing and future infrastructure, the construction industry is an essential partner in the Nation's efforts to nurture a green economy.

Sincerely,

STEPHEN E. SANDHERR,
Chief Executive Officer.

OFFICE OF THE GOVERNOR,
CHEYENNE, WY 82002,
May 18, 2009.

Senator JIM ANDERSON,
Majority Floor Leader,
92 Running Dutchman,
Glenrock, WY 82637.

DEAR SENATOR ANDERSON: I write to offer the full support of my office as you and the legislative Task Force on Wind Energy engage the many topics that attend wind energy production and transmission in Wyoming. While we are only starting to understand the benefits and other implications of such development in our State, the "gold rush" pace that has attended both the general wind policy discussion—here and around the world—and many of the leasing and development projects in Wyoming necessitates that you have the very best information and data at your immediate disposal. I also write with specific concerns that I know are already part of your Task Force agenda, but that are of such importance that they bear repeating.

Let me begin by noting your extraordinary efforts to distinguish yourself—nearly overnight—as a pre-eminent leader in our State on the issue at hand. It is a testament to your understanding of both your district and the State that you have crafted such a well-balanced and well-intentioned view of wind development and transmission in such a short span of time. You have my sincere thanks for stepping forward to lead in a time of such uncertainty.

With some of the Nation's largest natural gas fields, massive amounts of coal and other minerals, hundreds of thousands of acres of grazing and other agricultural lands and approximately 54 percent of the sage grouse in the world living within our borders—not to mention other world-class wildlife habitats and populations—Wyoming seems to be at the confluence of the great natural resource issues of our time. Add about 50 percent of the best winds in the United States occur in southern Wyoming and, according to some, a Top 10 solar energy portfolio along with the transmission infrastructure that necessarily must attend these new industries, and Wyoming also stands at the headwaters of two entirely divergent courses: one that leads to promise and the other that threatens our way of life. While this may seem melodramatic to some—we in Wyoming know and respect the "razor's edge" on which we are precariously balanced relative to sage grouse and other sensitive wildlife species, our economic sustainability and private property rights.

The people of our State most closely guard the seemingly incongruent principles of certainty and flexibility. We want certainty when we face risk and flexibility to take advantage of new opportunities. With specific regard to sage grouse and other sensitive wildlife populations, I am quite concerned that with changing times in our Nation, both politically and otherwise, the regulatory framework of the Endangered Species Act is far from settled. As the ship of conservation lists from side to side, any shift in the ballast of State-led conservation efforts risks a capsized boat. With little room for error, flexibility only exists in the mental contortions of those in Washington and elsewhere that want to inflict more controls on us in the form of great Federal designations like those contained in the Northern Rockies wilderness and wild horse legislation currently winding their way through Congress.

Since the inception of our State's core area approach to manage and conserve not only sage grouse but also 79 of Wyoming's 279 Species of Greatest Conservation Need that also inhabit core areas, we have tendered a delicate balance between development and protection. Miners, farmers, ranchers and oil and gas operators have worked to contour their activities to maximize production while they minimize disturbance to core areas. Apart from a passing affinity for sage grouse, pygmy rabbits, pocket gophers and a host of other species, the driver for this balance has largely been enlightened self-interest. Knowing that of the 54 percent of the world's sage grouse that live in Wyoming, over 82 percent reside in core areas, most of our traditional industries have been willing to forego new activities in this prime habitat until either populations are re-established elsewhere or technology advances to the

point that industrial development and sage grouse are seen as wholly compatible. I cannot speak with the same certainty with regard to wind development.

As the Nation moves to some sort of carbon reduction strategy, no matter our individual perspectives on the topic, the advance of wind and solar energy generation, under the broad label of "green energy," has come to Wyoming with a "gold rush" pace—and almost more concerning—"gold rush" mentality. Seemingly every acre—sage grouse core area, private, State and Federal lands, important viewsheds and otherwise—is up for grabs in the interest of "green, carbon-neutral technologies" no matter how truly "brown" the effects are on the land. Functionally, it is like taking a short cut to work through a playground full of school children and claiming "green" as a defense because you were driving a Toyota Prius.

To the very sharp point—when we started with the core areas for sage grouse, we had over 82 percent of the population relatively secured. At that time, we proposed to the U.S. Fish and Wildlife Service that we would never drop below a population of 67 percent in core areas. With the advance of wind, with very preliminary and limited data on potential projects, we know that the footprint of the proposed towers alone would chew up at least 2.44 percent of Wyoming's core area populations. With a very conservative 2-mile impact buffer, the population impact increases to 10.08 percent. For a 3-mile buffer, we jump to 12.69 percent of core area numbers and at 4-miles, which recent research in Kansas suggests may be a reasonable assumption, it elevates to almost 15 percent of core area populations being affected. To the really troublesome news—these numbers are, as mentioned preliminary and, to the best of our understanding, represent about half of the projects that are currently in the works. Still then, this makes no account for the impacts of transmission lines on sage grouse. Even discounting these potential impacts, it doesn't take a rocket scientist to subtract 15 percent from 82 percent and arrive at only 67 percent of our population—which part-and-parcel represents the "razor's edge" I referenced earlier.

Many with the wind industry have countered these figures by suggesting that even a 2-mile buffer is extreme. Unfortunately, they cite nothing in the way of literature or studies to back their assertions—just "common sense." The problem, as we know all too well in the context of wolves, the Preble's mouse and grizzly bears, is that common sense does not play well in Washington—only cold, hard data. As you proceed, given the devastating impact an Endangered Species Act listing would have not only on wind, but all other industries in our State—I would ask that you treat core areas, and other crucial habitats, with added caution—ascribing a "burden-shifting" premise as I have in my sage grouse Executive Order. By burden-shifting, I mean to say that inside core areas and key habitat, the burden is on the developer to show that they will do no harm. Unless and until they have met this burden, with real data, no authorization should be granted—either as a function of Industrial Siting and Development Act authority or otherwise. In contrast, outside of core areas and other crucial habitat, the burden is much relaxed—to the point of expediting permitting for not only wind—but other industrial and nonindustrial use.

While sage grouse and other species are of primary concern—given the potential to cripple our economy—I would suggest that the other issue that serves to limit wind's acceptance in Wyoming is what I term the botched and ill-formed answer to the question: "What's in it for me?" With oil and gas and coal, the answer is clear—jobs, significant local revenue, membership in our communities, and the list goes on. Certainly, there are impacts that attend these industries, but for the most part, the benefits of their existence outweigh the localized impact. With wind, we hear of the tax revenues generated as though the industry is going to displace coal and oil and gas as the underpinning of our economy. Unfortunately, the numbers simply do not pencil out. Beyond sage grouse and other wildlife impacts, I ask that your committee ensure that our State and local governments get a clear answer to the question of "What is in it for me?"

In addition, I would hope that you could elicit honest answers to questions tied to exactly why additional revenue generation for the State and local government is not possible. In my view, absent some better understanding and an enhanced ability to generate not only public, but also private revenue, I cannot easily countenance giving up any more of our State's viewshed, wildlife or open space for so little in return.

Finally, I would ask that you look at the impacts of wind generation—and more so transmission—on private property rights particularly for transmission lines with voltage below the current Industrial Siting and Development Act jurisdiction. I have every assurance, given your leadership, that this will be a centerpiece of the Task Force's effort. We must do all we can to avoid confrontation and attempt to meet everyone's needs—hopefully short of the courtroom. However, given the potential

use of condemnation, especially when siting and permitting linear rights-of-way, we must do all we can to guard against abuse and ensure fairness.

To close, we have abundant wind, coal, natural gas, forage, oil and other natural resources in our State. In the midst of this bounty, are some very finite and precious resources that could serve to derail our ability to take full advantage of these wealth-generating assets. As always, we must balance development with conservation. Fortunately, balance is something that we understand quite well.

I wish you and your Task Force the best as you proceed to discuss other important issues that relate to wind energy development and transmission. Please do not hesitate to put my good offices to work for the committee.

Best regards,

DAVE FREUDENTHAL,
Governor.

RESPONSE TO QUESTIONS OF SENATOR KENNEDY, SENATOR ENZI, AND SENATOR ISAKSON BY HILDA SOLIS

QUESTIONS OF SENATOR KENNEDY

Question 1a. I share your commitment to leveraging growth in green jobs to create real and lasting economic opportunity for workers and families across this country. I was pleased to read in your written testimony the speed with which the Department of Labor is putting green job training funds provided through the Recovery Act to work.

How can these training initiatives be supported through the WIA system after the ARRA funds have been expended?

Answer 1a. The Recovery Act provided additional funds for the Workforce Investment Act (WIA) formula programs, which have already been distributed to States and local areas. Prior to receiving the funds we issued guidance to the workforce system strongly encouraging linkages between WIA activities funded under the Recovery Act and other Recovery Act investments, including green jobs. As a part of the new WIA/Wagner-Peyser Act State plans we are requiring States to describe the new strategies for supporting emerging industries, including green jobs, through training and other means.

Question 1b. What changes need to be made to the existing WIA structure to better support the sustained growth of green jobs?

Answer 1b. Innovations in technologies, processes, and materials are expected to lead to the creation of entirely new green jobs, and driving the need for workers in many existing occupations to add to their skill sets.

The workforce system can better support the sustained growth of green jobs through a number of strategies, such as supporting connections between States' labor market research capacities and service delivery that is provided through One-Stop Career Centers to ensure high-quality career guidance on green jobs is available to job seekers.

In addition, State and local Workforce Investment Boards (WIBs) should build on their existing efforts to engage with businesses to better understand current and emerging skills requirements for green jobs. Further, as emerging industries begin to develop in a local area, local WIBs should be developing training strategies in partnership with training providers who can adjust their training to reflect the skills needs of those employers. One-Stop Career Centers should partner closely with educational entities, labor organizations, and community and faith-based organizations to provide high quality training and supportive services so that workers may successfully complete training, overcome barriers to employment, obtain family-supporting jobs, and advance along career pathways in green industries and occupations.

Question 1c. How can WIA be used to ensure that the training necessary to fill these green jobs is available to the most disadvantaged members of our communities?

Answer 1c. The public workforce system and its partners have a primary focus on serving disadvantaged populations. The Department is working hard to build on public resources, through Recovery Act funding, to ensure that those most in need have access to the training necessary to pursue pathways to sustainable employment and take advantage of green employment opportunities. WIA currently allows for supportive "wraparound" services such as childcare, transportation, housing, and need-related payments. These supportive services enable individuals to participate in training activities. Community and faith-based organizations play an important

role in providing these services to disadvantaged individuals. Additionally, the potential Pathways Out of Poverty grant solicitation for green jobs training competitive grants under the Recovery Act will develop and enhance such new partnerships to help disadvantaged populations.

Question 2a. If green jobs are to be supported for the long-term, it will require investments in pathways for our youth.

How will the Department use WIA Youth funds to train and place youth—particularly those from low-income and vulnerable communities—in high growth industries so they, too, can meaningfully participate in the green economy?

Answer 2a. The Employment and Training Administration's WIA/Wagner-Peyser Act State Plan guidance encourages States to serve those most in need. It further asks that States describe in their plans how the State will connect youth to existing and emerging job opportunities in their communities, including requiring academic activities to prepare them for entry to continued education and training as adults. For example, in the Summer Youth Work Experience Program we encourage linkages to job opportunities that may lead to interest in future job possibilities.

Question 2b. How does WIA Youth need to be changed in reauthorization to more effectively support this goal?

Answer 2b. While the Administration is still in the process of developing a reauthorization proposal, the Department has concerns about certain aspects of the existing program. WIA resources should be focused on those most in need. There are a particularly troubling number of out-of-school youth who need some connection back to a learning environment that works for them. Our program should have a strong emphasis on those most in need, and identifying these youth and connecting them to programs to ensure high school credit and post-secondary credentials linked with vocational skill training and real work experiences. The investment of Recovery Act funds in summer employment will be instructive about whether the reauthorized WIA should reinstitute an expanded subsidized summer employment program. The Department would be happy to work closely with you and your staff on this and other issues as we move forward to reauthorize WIA.

Question 3. How will you work to strengthen collaboration and coordination between ED and DOL?

Answer 3. We are partnering with many other Federal agencies, including the Department of Education. In order to improve the connection between workforce services and education services, we have pursued a variety of partnership approaches, such as: working with other agencies to provide coordinated technical assistance to our funding recipients; conducting pilots in partnership with other agencies; sharing information that is helpful in designing funding opportunities; and, entering into formal Memorandums of Understanding (MOUs). The Department of Labor signed an MOU between the Department of Energy and Department of Education (attached) to connect people to educational opportunities, training programs and green jobs at a Middle Class Task Force event in Denver, CO on May 26, 2009.

Through the Administration's proposed Career Pathways Innovation Fund (fiscal year 2010 Budget), and working with the Department of Education to implement it, we will focus on career pathway programs at community colleges. These programs provide clear sequences of coursework and credentials, each leading to a better job in a particular field. In addition, we have begun discussions to increase data sharing in order to improve outcome analysis, and the fiscal year 2010 budget requests $15 million for a workforce data quality initiative, in which the Department will partner with Education to help States incorporate workforce information into their longitudinal data systems.

Once an ETA Assistant Secretary is confirmed, I will be tasking that individual with developing specific cooperative efforts to better link education with workers and workforce system partners. As you know, the nominee for ETA Assistant Secretary has extensive experience in both workforce and education programs.

QUESTIONS OF SENATOR MURRAY

Question 1a. While the definition of a green job is still evolving, many believe that the majority of these jobs will be in the skilled trades. Some special populations among our workforce have expressed concern that they may be left out. For instance, advocates who represent the needs of women, individuals with disabilities, and older workers remind us not to ignore the needs of the workers they represent during the "green" revolution. I understand that you recently held a roundtable with women who represent a cross cut of stakeholder groups in the green economy.

As Secretary, what will you do to ensure that the Department is working to include these populations and others with specific needs in the training opportunities for green jobs?

Answer 1a. I am committed to working to make green jobs opportunities widely available. In the forthcoming Solicitation for Grant Applications (SGA) for green jobs training, we plan to encourage the publicly funded workforce system to more actively reach out to community and faith-based groups who can help connect underrepresented and economically disadvantaged populations to green jobs training opportunities. We also plan to target tribal communities.

Question 1b. What were some of the themes you heard from your recent roundtable on women in the green economy?

Answer 1b. The "Women and Green Jobs" roundtable was held on Earth Day 2009 and Nancy Sutley, Chair of the White House Council on Environment Quality, and nearly 40 leaders from across the country, representing unions, the private sector, the education community, and government participated. At the event, we discussed how the "greening" of our economy will bring significant changes to the workplace that will require workers to have new and different skills.

Many of the roundtable speakers highlighted how supportive services, such as improved childcare, transportation options, mentoring and educational opportunities, could help women move out of poverty and into higher-skilled, higher-paying jobs.

Question 2. Many think the promise of a green economy holds a great deal of hope for workers who have lost their jobs due to the economic downturn or who need support in pulling themselves out of poverty. While I agree with those opportunities and hope the Department works to make them a reality, I wonder what your plan is to help current workers go green.

How does the Department plan to help businesses that want to move to green practices train their incumbent workers as necessary?

Answer 2. Employers will need to work closely with the public workforce system to communicate their workforce and skills needs related to green jobs to ensure that training is aligned to meet those needs. The Department encourages the workforce system to use WIA resources for on-the-job training and other "learn while you earn" strategies. The Department recently released a Training and Employment Notice (TEN) that previews plans for the American Recovery and Reinvestment Act of 2009 Competitive Grants for Green Jobs Training. The TEN describes five potential grant solicitations, including the "Energy Training Partnership Grants" which would focus training resources on both incumbent and dislocated workers.

Question 3. As you know, our Nation's workforce system, while not perfect, has existing capacity to help reach both workers and job seekers and employers in their local communities to help meet job training needs. While some adjustments will have to be made to adapt to the demands of a green economy, I want to ensure that the Department will maximize these resources that already exist instead of reinventing the wheel.

How will the Department work to use the existing structure of our workforce system to provide training rather than creating a new program?

Answer 3. We encourage strong connections between the public workforce system and employers who have emerging green jobs so that they can develop a shared understanding of the emerging skills and competencies of workers. The competitive series of Green Job Training grants will leverage the existing structure of the workforce system to develop partnerships, and implement programs that support green jobs. The Green Jobs Training investments will enhance the capacity of local Workforce Investment Boards and the One-Stop Career Centers to drive workforce training strategies in green sectors. The Department is especially interested in programs and projects that leverage existing best practices of the public workforce system. In addition, the Green Jobs Training grants will help support State labor market research in green, emerging industries.

Question 4. As you know, I'm committed to modernizing and reauthorizing the Workforce Investment Act this year if possible—and this Congress at least.

What policy ideas do you have for a modernized workforce system to enable it to be responding to the demands of green economy?

Answer 4. The Department is engaged in an ongoing process to develop principles for WIA reauthorization with our partners in the workforce system and other Federal agencies. We will be happy to work with you and your staff as this process moves forward.

In addition, current and relevant State and local Labor Market Information and Research will support the workforce system's efforts to identify green businesses

and sectors of the economy that are in need of workers now or will begin to grow as the economy recovers. Such research will also identify transferable skills for workers who have lost their jobs and need to transition to new careers, and develop or enhance a labor exchange infrastructure. Understanding where green jobs are and the skills they require will directly impact the States' planning and implementation of comprehensive workforce development strategies.

Question 5. Since green jobs cross all industry sectors and many cabinet agencies, I am interested in how you are reaching out to your colleagues and others to develop a coordinated approach to training workers for green jobs—ranging from weatherization jobs to jobs in renewable energy, biofuels, or environmentally sustainable processes and materials manufacturing.

What coordination activities do you have underway with your Administration colleagues and others to help retool America's workers in the areas of energy efficiency and renewable energy industries?

Answer 5. The Department of Labor signed an MOU between the Department of Energy and Department of Education (attached) to connect people to educational opportunities, training programs and green jobs at a Middle Class Task Force event in Denver, CO on May 26, 2009. Another important development at the Middle Class Task Force event was the announcement that the Council on Environmental Quality (CEQ) is convening an inter-agency meeting to discuss weatherization and retrofitting and their role in the expansion of green job opportunities. In addition, the Department of Labor is partnering with the Department of Housing and Urban Development (HUD) to help people living in public housing train for and get jobs working on public housing retrofitting projects. All of these partnerships are designed to maximize resources and expertise in workforce development and industry connections for a shared understanding of industry needs, skill requirements of workers, training opportunities available, and making this information available to the public to ensure equal opportunity for all workers, including disadvantaged populations. DOL is also encouraging other agencies to facilitate the listing of any jobs created using Recovery Act funding on the federally funded labor exchange system. In fact, the Federal partners even refer to themselves as the "Federal family."

Question 6. I know that the Green Jobs Act places a significant focus on labor-management partnerships and connections to the workforce system.

Do you anticipate that community-based organizations, which are a key partner in the current workforce system, also will play an important role in addressing the green job training needs of both works and employers?

Answer 6. Community-based organizations will continue to play a key role in partnerships with local Workforce Investment Boards and their One-Stop delivery system. In the Department's recently released Training and Employment Notice (TEN) that previews plans for the American Recovery and Reinvestment Act of 2009 Competitive Grants for Green Jobs Training, the description for potential solicitation on Pathways Out of Poverty Grants specifically names community and faith-based organizations as groups that will be eligible to compete for potential grants.

QUESTIONS OF SENATOR ENZI

Question 1a. There are currently many unemployed individuals across the Nation. How does the Department plan to assist these workers to connect with these green jobs and acquire the skills needed to qualify for them?

Answer 1a. One-Stop Career Centers are the local access point for many unemployed workers across the country and I know they are eager to connect workers to new opportunities and jobs. One-Stop Centers are a primary resource that unemployed workers utilize when seeking employment and training, and even retraining, for new careers and skills upgrades. The Department will continue to encourage workforce development approaches that provide an integrated system of education, training and support services for workers.

Question 1b. Additionally, what are the Department's plans for implementing the American Recovery and Reinvestment Act (ARRA) job training program for green job careers?

Answer 1b. I have attached the recently released Training and Employment Notice (TEN) that provides an overview of preliminary plans for a series of competitive grants for Green Jobs Training. The TEN describes five potential grant solicitations that we anticipate releasing in June.

Question 2. As a former small business owner, I believe a workforce system should be locally driven and have meaningful roles for businesses. Other than your interest

in working with business leaders to discuss the role of apprenticeships in the "green economy", what other ways do you intend to work with businesses as the Department of Labor distributes the general Recovery funds and the green jobs funding?

Answer 2. We encourage labor-management partnerships so that the businesses spurring our economic recovery can help craft the training programs to fill their employment needs. The Department supports and encourages the implementation of sector strategies geared towards green industries. Sector strategies provide an integrated system of education, training, and supportive services that promote skill attainment and career advancement for workers. Industry involvement is at the heart of the programs and projects that will be funded with the competitive green jobs training grants because of their deep knowledge of the specific industry and the required workforce needs. Employers provide this critical expertise along with information about available green jobs.

In a recent visit to the Queens, NY Workforce1 Career Center, I had the opportunity to meet with community business leaders who are actively utilizing the Department's employment and training programs. I look forward to continuing to meet with business owners to receive input on the work of the Department.

Question 3a. When we talk about green jobs, are we talking about replacing traditional jobs or are we talking about adding green skills to existing jobs?

Answer 3a. In short, yes to both questions. We are working to ensure that communities impacted by declining industries and experiencing deep job losses, such as the automotive industry, are targeted for green jobs training. The Training Employment Notice (TEN) on green jobs provides descriptions of potential solicitations for green jobs training that contain a set-aside of funding for auto communities. I recently announced that $50 million of the $500 million in competitive grants for green jobs training would be dedicated to auto communities.

In addition, the Department is supporting occupational research that is beginning to define green jobs, review sectors impacted by green investments and understand how new, green technology and materials will affect occupational requirements. We will continue to keep you updated on our findings.

Question 3b. How does the Department plan to work with communities that will experience loss of traditional jobs?

Answer 3b. As cited in the answer to Question No. 3, the Training Employment Notice (TEN) on green jobs training details how we are working to ensure that communities impacted by significant job losses in declining industries, such as the automotive industry, are targeted for green jobs training. I recently announced that $50 million of the $500 million in competitive grants for green jobs training would be dedicated to auto communities. In addition, the TEN lists a potential solicitation entitled "Energy Training Partnership Grants" which would focus training resources on both incumbent and dislocated workers.

Question 4. How does the Department plan to use the current workforce system in communities under the Workforce Investment Act to implement the recovery funds for the programs you describe in your testimony?

Answer 4. We encourage strong connections between the public workforce system and employers who have emerging green jobs so that they can develop a shared understanding of the emerging skills and competencies of workers. The competitive series of Green Job Training grants will leverage the existing structure of the workforce investment system to implement the partnerships, programs, and projects related to green jobs and skills development. These investments will enhance the capacity for local Workforce Investment Boards and the One-Stop Career Centers to drive workforce training strategies in green sectors. The Department is especially interested in programs and projects that leverage existing best practices of the public workforce system and their partners and will encourage replication of these best practices as they emerge.

QUESTIONS OF SENATOR ISAKSON

Question 1. Do you believe that some training providers are prohibited from accessing Federal green job training grants in the Workforce Investment Act?

Answer 1. While the Solicitations for Grant Applications are still being drafted, it appears that there will be a wide variety of eligible organizations who can apply provided they meet the requirements outlined in each of the SGAs.

Question 2. If the goal of the green movement is to put as many people to work as possible, do you support the statutory language that would potentially bar open shop training providers from accessing green jobs training grants? Do you intend

to exclude over 84 percent of the private construction industry when creating jobs and improving the sustainability of our country's buildings?

Answer 2. As outlined in the answer to Question No. 1, the Green Jobs Training Solicitations for Grant Applications are still being drafted. It appears that there will be a wide variety of eligible organizations who can apply provided they meet the requirements outlined in each of the SGAs.

Question 3. Would you be supportive of a bill that would help end the discrimination of open shop training providers by amending the Workforce Investment Act to allow all training providers, regardless of union affiliation, access to these important funds?

Answer 3. Unfortunately, I am unable to take a position on legislative proposals without reviewing the bill text. I would be happy to make my staff available to provide technical assistance for any such legislation.

Question 4. Please describe the difference between a carpenter and a "green-collar" carpenter?

Answer 4. We are still working with our partners in the Federal Government and private sector to develop a broad definition of green jobs, and the fiscal year 2010 budget requests $8 million for the Bureau of Labor Statistics to begin research to define and quantify green jobs.

Question 5. Do you think that the electricians that installed solar panels 30 years ago should be called "green-collar" electricians?

Answer 5. Our definition will likely focus on green jobs today, not 30 years ago. Our immediate focus is on achieving our common goals of spurring economic recovery and providing a skilled workforce for emerging and growing U.S. industries today.

Question 6. The city of Washington, DC has more green, Leadership in Energy and Environmental Design (LEED) certified buildings than almost anywhere else in the United States. Would you consider the workers that built these buildings "green-collar" workers?

Answer 6. As stated in the answer to question No. 4, we are still working with our partners in the Federal Government and private sector to develop a broad definition of green jobs, but in your particular example, I think that workers who directly contributed to the LEED-certification for such buildings should be considered "green-collar" workers. Not all job categories in the process of constructing a LEED-certified building are necessarily green collar jobs, so I would want to examine the different job categories before making a broad determination. Again, I would reiterate that we are working diligently to define green jobs and skills.

MEMORANDUM OF UNDERSTANDING

AMONG THE UNITED STATES DEPARTMENTS OF EDUCATION, ENERGY AND LABOR

This Memorandum of Understanding (MOU) is a non-binding expression of intent between the United States Departments of Education (Education), Energy (Energy) and Labor (Labor) to collaborate on linking the United States workforce to jobs, training and education opportunities funded by the American Recovery and Reinvestment Act (Recovery Act) and annual appropriations. The Departments of Education, Energy and Labor may be referred to individually as a 'Department' and together as 'Departments'.

WHEREAS, Education, through its formula-based State grant program, discretionary funded activities, and technical assistance efforts with State and local educational agencies, and community colleges, promotes and supports the development of career pathways and program of study models that provide seamless transitions for students from high school to post-secondary education and careers;

WHEREAS, Labor, through formula-based and discretionary programs, supports activities at the regional, State and local levels to link job-seekers to employment and training opportunities and prepare workers for opportunities in high-growth and emerging industries;

WHEREAS, Energy supports research, development, demonstration, and other activities to help the U.S. transform into a nation that relies much more heavily on renewable energy; implements state-of-the-art energy efficiency technologies and processes in homes, businesses, transportation industry, and utilities; and develops and maintains a smart grid to ensure clean and reliable power across the Nation;

WHEREAS, Energy focuses on the development of basic science knowledge and industry-supported technology, and develops related curricula, certifications and standards; provides technical assistance to ensure state-of-the-art training and education programs; and facilitates coordination with industry to enhance opportunities for hands-on training;

WHEREAS, the Departments seek to efficiently and effectively advance existing and future training and education programs; avoid duplication of effort; fill skill deficiencies; optimize matching of training programs with employment needs; provide career ladders, lattices and pathways for American workers; and provide for a skilled workforce in the clean energy and energy efficiency sectors;

WHEREAS, the Departments seek to collaborate on efforts that will benefit the U.S. economy and workforce today and over the long-term, and help ensure the development of a significantly expanded and qualified workforce to install and operate new and advanced clean energy and energy efficiency technologies and processes in order to reach U.S. climate change, national security and other goals;

NOW, THEREFORE, the Departments have reached the following understanding:

ARTICLE 1

OBJECTIVE

1. The objective of this MOU is to establish a framework to assist the Departments in collaborating for mutual and public benefit and through open and reciprocal exchange of information on all aspects necessary to ensure a successful partnership.

ARTICLE 2

ACTIVITIES

Subject to the availability of funds and applicable laws Departments will exchange a variety of information and participate in joint activities including but not limited to the following:

1. Each Department agrees to notify the other two Departments of relevant awards made with Recovery Act as well as appropriated funds, and include in its contracts, as appropriate, provisions that encourage awardees to coordinate to the extent possible with each Department's appropriate regional, State and local offices for related activities;

2. In accordance with its statutory authority. Energy agrees to conduct outreach to employers and industry-related organizations, such as industry associations, labor-management organizations, and labor organizations, and to other organizations that represent the interests of workers, employers, and the education and training community, and to other relevant groups including community or faith-based organizations, to support Education and Labor in the identification of industry-validated standards, assessments, best practice regimes, accreditations, and certifications; and in the development of career ladders, lattices, pathways and programs of study that can prepare students for rewarding careers in the energy sector;

3. Where appropriate each Department agrees to disseminate information about relevant programs and activities carried out by the other two Departments by jointly run webinars conferences, and outreach materials using the web and/or other means;

4. The Departments will work together to develop mutually supportive and reinforcing projects with aligned goals to ensure the development of career ladders, lattices and pathways for jobs in energy efficiency and renewable energy fields.

ARTICLE 3

MANAGEMENT AND FUNDING

1. To ensure effective implementation and oversight of this MOU, the Departments intend to establish an Oversight Committee consisting of up to six members, with each Participant nominating up to two Federal employees to serve on this body. Each Department will engage in activities related to its statutory authorities and will be responsible for its own costs associated with attending and participating in Oversight Committee meetings.

2. The Oversight Committee should provide periodic reports to the Departments on collaborative efforts described in Article 2: Activities.

3. This Agreement in no way restricts any of the Departments from participating in any activity with other public or private agencies, organizations or individuals.

4. This Agreement is neither a fiscal nor a funds obligation document. Nothing in this Agreement authorizes or is intended to obligate the Departments to expend, exchange, or reimburse funds, services, or supplies, or transfer or receive anything of value.

5. This Agreement is strictly for internal management purposes for each of the Parties. It is not legally enforceable and shall not be construed to create any legal obligation on the part of any Department. This Agreement shall not be construed to provide a private right or cause of action for or by any person or entity.

6. All agreements herein are subject to, and will be carried out in compliance with, all applicable laws, regulations and other legal requirements.

ARTICLE 4

COMMENCEMENT, MODIFICATION, AND TERMINATION

Cooperation under this MOU may commence upon signature and continue for 5 years. The MOU may be modified at any time by mutual determination of the Participants in writing. If any Department desires to terminate this agreement, it should endeavor to provide 120 days advance written notice to the other Departments.

Energy enters into this Agreement under the authority of section 646 of the Department of Energy Organization Act (Pub. L. 95–91, as amended; 42 U.S.C. § 7256).

Education enters into this Agreement under the authority to enter into agreements in section 415 of the Department of Education Organization Act (DEOA) (20 U.S.C. § 3475), and consistent with the purposes set forth in section 102(4)(5) and (6) of the DEOA (20 U.S.C. § 3402(4), (5) and (6)).

Labor enters into this Agreement under the authority of 29 U.S.C. 551, which established the Department for the purpose of fostering, promoting, and developing the welfare of the wage earners of the United States, to improve their working conditions, and to advance their opportunities for profitable employment.

Signed in triplicate,

ARNE DUNCAN,
Secretary of Education.

STEVEN CHU,
Secretary of Energy.

HILDA SOLIS,
Secretary of Labor.

TRAINING AND EMPLOYMENT NOTICE

To: State Workforce Agencies; State Workforce Administrators; State Workforce Liaisons; State and Local Workforce Board Chairs and Directors; State Labor Commissioners; State UI Directors; State Apprenticeship Directors; Comprehensive and Affiliate One-Stop Career Center Directors; Senior Community Service Employment Program Grantees; and Indian and Native American Program Grantees; and Migrant Seasonal Farmworker Grantees

From: Douglas F. Small, Deputy Assistant Secretary

Subject: American Recovery and Reinvestment Act of 2009 Competitive Grants for Green Job Training

1. PURPOSE

The American Recovery and Reinvestment Act of 2009 (Recovery Act) was signed into law by President Obama on February 17, 2009. The Recovery Act is intended to preserve and create jobs, promote the Nation's economic recovery, and assist those most impacted by the recession. Among other funding directed toward the Department of Labor (DOL), the Recovery Act provides $750 million for a program of competitive grants for worker training and placement in high growth and emerging industries. Of the $750 million allotted for competitive grants, the Recovery Act designates $500 million for projects that prepare workers for careers in the energy efficiency and renewable energy sectors described in Section 171(e)(1)(B) of the Workforce Investment Act of 1998 (WIA), as amended to incorporate the Green Jobs Act of 2007. This notice describes the Employment and Training Administration's (ETA) initial plans for awarding these "green job training" funds under the Recovery Act so that interested organizations can begin to plan for the application process and can strengthen or build partnerships to be successful applicants.

2. REFERENCES

• The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111–5, 123 Stat. 115, Division A, Title VIII (February 17, 2009).
• Green Jobs Act of 2007, Pub. L. No. 110–140, 121 Stat. 1748 (codified at 29 U.S.C. § 2916).
• Workforce Investment Act of 1998, Pub. L. No. 105–220, 112 Stat. 939 (codified as amended at 29 U.S.C. § 2801 *et seq.*).
• Training and Employment Notice (TEN) 30–08, "Overview of the Employment and Training Administration's implementation strategy for Workforce Investment Act and Wagner-Peyser funding under the American Recovery and Reinvestment Act of 2009."
• Training and Employment Guidance Letter (TEGL) 17–08, "American Recovery and Reinvestment Act (Recovery Act) Funds Financial Reporting Requirements."

3. BACKGROUND AND STRATEGIC VISION FOR COMPETITIVE GRANTS UNDER THE RECOVERY ACT

ETA is currently formulating a series of grant competitions for these funds as authorized under the Recovery Act. Through these grants, ETA seeks to assist individuals impacted by the recession by providing training and placement into employment, including the transition of auto and auto-related workers to jobs in the green energy sector. ETA will promote economic recovery by supporting the training needs of workers and employers in high growth and emerging industries. These grants also offer an opportunity to demonstrate how partnerships between the public workforce system and other public and private systems, including labor-management partnerships, education institutions, community and faith-based organizations, and research institutions can meet the workforce needs of the energy efficiency and renewable energy sectors and other industry sectors.

Across the series of grant competitions, these partnerships will undertake collaborative activities designed to define emerging energy efficiency and renewable energy jobs and train qualified workers to fill them. States will play a key role, working with public and private sector partners, to coordinate and gather information on skill qualifications for existing, new and emerging careers, and will publicize this information. State Workforce Investment Boards (SWIBs) will also play a key role in developing plans and leading renewable energy and energy efficiency employment efforts across a partnership, and implementing training programs in local and regional workforce areas. One-Stop Career Centers and a wide variety of community and labor organizations eligible for these grants will also benefit from these State research and planning efforts to meet the training needs of workers and employers in emerging energy efficiency and renewable energy industries. Successful organizations and partnerships will ensure that supportive services are integrated with education and training programs so that individuals can have access to a comprehensive array of supportive options. Further, these organizations and partnerships will assist individuals in entering career pathways leading to economic self-sufficiency.

Finally, it is the Department's vision for these competitive grants to serve the purpose of training and teaching workers the skills being created in these emerging energy efficiency and renewable energy sectors. These efforts will lead program participants to job placement while leveraging other Recovery Act investments intended to create jobs and promote economic growth.

4. OVERVIEW OF POTENTIAL FUNDING OPPORTUNITIES

In order to implement this strategic vision, ETA is tentatively planning to issue a series of Solicitations for Grant Applications (SGAs). An overview of the **potential** solicitations anticipated for funding is provided below. Please be advised that the final funding opportunities may vary from those currently anticipated.

A. State Labor Market Information Improvement Grants

This will be a competition among State Workforce Agencies (SWAs) or consortia of the SWAs of multiple States to collect, analyze, and disseminate labor market information, as well as develop a labor exchange infrastructure to direct individuals to careers in the energy efficiency and renewable energy sectors described in Section 171(e)(1)(B)(ii) of WIA. The activities conducted by successful applicants will be coordinated with and complement work conducted by the Bureau of Labor Statistics. ETA strongly encourages States to form consortia and jointly apply for these grants, and the SGA will reflect a preference for such approaches. Grantees will track workforce trends resulting directly or indirectly from Recovery Act investments, as well as related State, local, or private sector investments that create jobs in energy efficiency and renewable energy sectors. In addition, grantees will improve labor ex-

change infrastructure to populate occupational listings in job banks. Activities should be focused on ensuring that workers trained for green jobs will be able to find employment in energy efficiency and renewal energy sectors after they finish training.

This means identifying the existing and emerging needs of employers in these emerging industries, in terms of both skills and job openings, and making available employee placement tools to help match workers with those jobs.

B. Energy Training Partnership Grants

Two separate applicant pools will compete for grants under this solicitation: (1) eligible national labor-management organizations with local networks; and (2) statewide or local strategic nonprofit partnerships consisting of labor-management organizations, labor, business, Workforce Investment Boards (WIBs), and other organizations. These grantees will deliver training that leads to employment in careers in energy efficiency and renewable energy sectors described in Section 171(e)(1)(B)(ii) of WIA. Grantees will utilize partnerships to design and distribute training approaches that lead to portable industry credentials and employment, including registered apprenticeship. These grants will focus on dislocated and incumbent workers. **A portion of the funds under this SGA will be reserved for communities or regions undergoing auto industry-related restructuring as discussed below.**

C. Pathways Out of Poverty Grants

Two separate applicant pools will compete for grants under this solicitation: (1) eligible national community-based and faith-based organizations with local networks; and (2) local partnerships that include community-based organizations, education and training institutions, business, and labor organizations. Successful applicants will provide training and placement services to individuals seeking pathways out of poverty and into employment within the energy efficiency and renewable energy sectors described in Section 171 (e)(1)(B)(ii) of WIA. Targeted populations include low-income and under-skilled workers, unemployed youth and adults, high school dropouts, or other underserved populations, with priority given to areas of high poverty. Successful training programs for these populations will: (1) include sound recruitment and referral strategies for targeted populations; (2) integrate basic skills and work-readiness training with occupational skills training; (3) combine supportive services with training services to help participants overcome barriers to employment; and, (4) provide services at times and locations that are easily accessible.

D. State Sector Training Grants

This will be a competition among SWIBs in partnership with their SWA, local WIBs and One-Stop Career Center Systems, or regional consortia of Boards. Grant funds awarded under this SGA will be used to provide training and job placement activities aligned with a workforce sector strategy that will target energy efficiency and renewable energy sectors. The strategy will reflect State energy policies and how they impact the work of the local Workforce Investment system and One-Stop Career Centers to prepare workers for the energy efficiency and renewable energy sectors described in Section 171(e)(1)(B) of WIA. Successful applicants will demonstrate: (1) strong partnerships to develop the energy efficiency and renewable energy workforce; (2) relationships with other State agencies receiving Recovery Act funding to support strategic planning and implementation efforts; and (3) ability to implement a workforce development approach that targets the needs of a specific industry sector and provides an integrated system of education, training, and supportive services. A portion of the funds under this SGA will be reserved for communities or regions undergoing auto industry-related restructuring as discussed below.

E. Green Capacity Building Grants

This will be a competition to build the capacity of current DOL grantees to prepare targeted populations for employment in the energy efficiency and renewable energy sectors described in Section 171(e)(1)(B) of WIA. These awards will support organizations as they update existing training and job placement programs for the emerging green economy in order to facilitate the success of other projects under the Green Jobs Initiative. Key activities will include the purchase of equipment, staff professional development, curriculum development and/or adaptation, partnership development, and where necessary, the hiring of additional staff.

Competitive Grant Focus for Areas Undergoing Significant Automotive Related Industrial Restructuring: A portion of the funding under the Energy Training Partnership Grants and the State Sector Training Grants will be reserved to facilitate the transition of auto and auto-related workers to the green/energy effi-

cient workforce. Grants will provide job training, counseling, and placement services to residents from auto communities or incumbent and dislocated workers affected by significant automotive-related restructuring. To qualify for these grants, the geographic area proposed to be served by the project must have within it at least one motor vehicle manufacturer or automotive part supplier and have experienced significant dislocation. Prospective grantees may also propose to serve workers from area facilities who reside outside the defined area. For purposes of these SGAs, the industry is defined to include original equipment manufacturers and Tier 1, 2 and 3 part suppliers.

5. ESTIMATED SCHEDULE OF FUNDING

We anticipate that Solicitations for Grant Applications will be published in June 2009, with application closing dates starting late summer. It is DOL's intention to implement the Recovery Act expeditiously and effectively, with full transparency and accountability of our expenditures.

6. ACTION REQUESTED

States are encouraged to share broadly this notice with local WIBs and other stakeholders.

7. INQUIRIES

Notice of all Federal solicitations is posted in the *Federal Register* and at *www.grants.gov* and DOL-specific information is also available on our Web site at *www.doleta.gov/grants*. Additional information on funding available through the Recovery Act is on the Web at *www.doleta.gov/recovery*.

Please note that the Department's staff, including the Office of Grants and Contracts Management, is unable to answer inquiries related to any of the potential competitive opportunities outlined above. Each future SGA will contain detailed instructions about times and dates for prospective applicant conferences and for submitting a complete application.

RESPONSE TO QUESTIONS OF SENATOR MURRAY AND SENATOR ENZI
BY LEE LAMBERT

QUESTIONS OF SENATOR MURRAY

Question 1a. Community colleges are often the most tangible connection between workforce needs and education for current and future workers. To stay on top of those needs, colleges have to have strong relationships with industry leaders, workforce professionals, and others who understand both the labor market and the education field.

What have been the most beneficial relationships for Shoreline with key stakeholders in the industry and education community in helping you provide new, green programs of study?

Answer 1a. The concept of partnerships is integral to the community college mission. At Shoreline Community College, there are five general stakeholder categories and all of them are participants in our green-jobs programs, including:

- Industry—These connections are keys to keeping college programs in tune with market needs.
  - The automotive program at SCC is a national model for involving industry partners. Not only are major manufacturers such as Toyota, Honda, GM and Chrysler involved, the program has direct ties to dealerships through the Puget Sound Auto Dealers Association (PSADA), which is co-located on campus. This manufacturer connections ensure that students are learning to use workplace-specific equipment. The PSADA connection ensures that every student is guaranteed a job upon graduation.
  - SCC's renewable energy program has strong ties to both manufacturing and retail businesses, such as Silicon Energy, LLC, an emergent, Washington-based solar module maker, and local electrical firms like NW Mechanical, based in Shoreline. The renewable energy program staff is looking at the SCC automotive program as a model to further integrate job-related learning with market needs.
- Education—Community colleges provide educational pathways students can choose to follow as far as they wish to go.
  - At SCC for example, a student can choose to complete a quarter-long class on photovoltaic system design and take that State-approved certificate right

back to the marketplace. Or, a student can enroll in that same class as part of a 2-year Associate of Science degree program that articulates to a Bachelor's of Science, Engineering degree with our university partner, Washington State University.

- SCC's automotive program makes sure the pathway is open, too. For example, each summer the program hosts annual skills update trainings for high school automotive instructors. This summer, the program will be free to high school instructors because SCC program staff-solicited donations from auto dealers across the Pacific Northwest. This outreach program not only ensures high school instructors keep their knowledge current, it establishes a personal connection that is useful for student recruiting and recommendations.

- Labor—While labor traditionally maintains its own training pathways, officials are recognizing that community colleges can support those efforts, whether through hosting skills-training centers or providing the basic academic foundation needed for so many of today's and tomorrow's jobs.
  - Shoreline Community College has established partnerships with local public utilities for a pre-apprenticeship basic education program designed to provide basic math, literacy and personal skills needed for the workplace.
  - SCC's renewable energy program works closely with the officials from the local International Brotherhood of Electrical Workers. IBEW officials assist in reviewing curriculum and students are able to enroll in IBEW programs.

- Government—Working with other governmental agencies is critical to the success of community college programs for funding and articulation with other training opportunities.
  - SCC works closely with a variety of governmental agencies, including King County, King County Workforce Development Council, Washington State Department of Community, Trade and Economic Development and the State Energy Extension Office/Washington State University. These connections bring critical funding and program articulation.

- Community—Maintaining close communication with communities—the geographically surrounding area as well as interest-based groups—is necessary to understand the needs of the students who live in these communities.
  - Community involvement is a core value for many SCC employees, resulting in top-to-bottom community involvement, from a chief academic officer who barbecues salmon at a chamber of commerce community event and serves on an inner-city high-school foundation board to an information technology technician who organizes a campus "closet swap" to help defray clothing expenses for employees, students and community members.
  - At the program level, partnerships with community-based organizations allow the college to forge deep community connections. For example, this past summer a partnership between the renewable energy program and the Seattle-based Moontown Foundation allowed hundreds of inner-city and economically disadvantaged youth to learn about green-jobs training programs and discover the educational pathways that lead to green-jobs careers.

Question 1b. In your opinion, how are community colleges uniquely positioned to provide training to a wide array of workers?

Answer 1b. Community colleges focus on three main mission areas: workforce training, academic transfer, and basic skills. This focus positions community colleges to serve all types of people, from the least-skilled workers who want to learn English and/or gain marketable skills, to those who need a few courses or a degree to move up in their career. Our close relationships with business and industry are also keys to providing the right type of training in the right places at the right time. In addition, the recent and swift economic changes have revealed an emergent role for community colleges as post-baccalaureate institutions. For example, every one of the students enrolled in one biotechnology program at SCC, already had a 4-year degree. Shoreline continues to see growth in the number of returning 4-year degree students who are looking for employable skills.

Question 1c. How are these partnerships important to the sustainability of Shoreline's efforts to provide green programs of study?

Answer 1c. Perhaps the two most important benefits of SCC's partnership efforts are the connectors to funding and student recruitment.

- As traditional government funding sources are strained, SCC must look to partners in the private sector for help. This value-for-value approach is well-understood and appreciated by business-sector partners.

• Markets and job-seekers may see opportunities, but not always understand how to connect. Putting those two groups together is a role Shoreline Community College facilitates through its varied partnerships.

Question 2. Many individuals who face significant challenges in accessing and staying in education or employment have the hardest time entering college and succeeding.

How does Shoreline work to help individuals who face these challenges gain access to and succeed in their green programs of study?

Answer 2. SCC uses a number of State, Federal and donor-funded programs to address access and achievement issues, including:

• Integrated Basic Education and Skills Training (I–BEST) is a statewide program that targets those interested in job training but lack needed English language or basic reading and math skills. I–BEST program classes have two instructors in the same classroom to teach both technical and basic skills. Students who need to improve their English language or brush up on math can get the help they need while studying in the career field of their choice. Shoreline offers five I–BEST programs, including Automotive General Service Technician, Manufacturing / CNC Machinist, Bilingual Office Assistant, Nursing Assistant Certified and Security Guard Training.

• Opportunity Grants: State-funded at $11.5 million a year for all community colleges, this program supports students participating in training for high-wage, high-demand career pathways. A goal of the Opportunity Grant program is to help low-income adults reach the educational "tipping point" (completion of 45 college credits and a credential) and beyond.

• Career Navigator: Unique to Shoreline's General Service Technician (automotive) program, the Career Navigator is funded through the Aspen Institute, King County Workforce Development Council, Workforce Investment Act and other funders. The program provides additional guidance and support for qualifying students in the program.

Question 3. Staying connected to the State or the community's larger strategic plan for economic growth is important to providing relevant programs of study for students' career success and for the well-being of local businesses.

How has Shoreline worked to ensure that its "green" programs of study are relevant to the economic needs of the community it serves—including workers and businesses?

Answer 3. The beauty of community colleges is that while their mission requires community and mark responsiveness, the public funding aspect also requires them to fully justify programs based on need and effectiveness.

• SCC uses a process known as a DACUM, which stands for "developing a curriculum," to establish a relevant, up-to-date and localized research base for curriculum and instructional development. SCC's renewable energy program was launched after a DACUM process that included representatives from all five partner categories. The result was a detailed look at the curriculum and skill sets that would be taught, as well as a list of employment areas and average annual salaries available in the Puget Sound region.

Question 4a. What recommendations do you have for the Department of Labor to improve their service to workforce leaders helping workers access training for green jobs?

Answer 4a. The Department of Labor should serve as the standard bearer for "green" workforce training. All occupations have the capacity to be "greened"—green refers to methods of doing the work. The Department of Labor should prioritize funding for innovative occupational training programs that teach trainees the skills necessary to minimize environmental impact, energy consumption, carbon gas emissions, and energy efficiency in their industry.

The Department of Labor should facilitate a shift in the focus of State and local workforce investment boards from the provision of short-term pre-vocational skills training to high quality occupational skills training based upon nationally-recognized, industry skill standard and training necessary to secure family wage employment. Many of the currently funded short-term pre-vocational skills programs lead to credentials not recognized by industry and do not result in high- or family-wage jobs. While this recommendation cuts across all employment sectors, particular emphasis should be placed on occupational skill development in identified green jobs/industries in order to facilitate Federal policy objectives around clean/green, innovation and "post internal combustion engine (post–ICE)" technologies.

In addition, the Department of Labor should serve as a hub for resources and best practices for States and local areas as they relate to green jobs. The Department should facilitate the sharing and replication of best practices throughout the Nation through technical assistance, targeted grant funding, convening of State/local policymakers around topics related to greet jobs, disseminate nationally recognized green job skill standards, and facilitate the development of national policy and a standard platform of basic skills for all American workers.

Question 4b. For Congress as they work to reauthorize the Workforce Investment Act?

Answer 4b. One example is the area of "post internal combustion engine" technologies, where the economy and employment will require the retraining and reskilling of American workers in green methodologies. The Workforce Investment Act should be modified to incentivize State and local boards to provide high quality training, at the occupational skills training level, and should allow all Americans, preparing for employment, to achieve a basic platform of education. The current Workforce Investment Act performance/accountability system creates disincentives for local areas to enroll Americans in occupational skills training activities. The reauthorized Act should focus funding on efforts designed to make our industries more competitive globally while improving the quality of education for all Americans, thereby making our citizens more competitive for high-skill, high-wage employment opportunities.

Most importantly, there is a need to streamline the administrative requirements of the Workforce Investment Act to ensure that, to the maximum extent possible, funding is directed toward improving the occupational skills of Americans. Unfortunately, much of the current national investment is "lost" in multiple bureaucratic layers, a complicated State and local board structure and other administrative functions.

Question 4c. For businesses and educators engaging in the green economy?

Answer 4c. Strong collaboration between business/industry and higher education will help move American workers into the green economy. Business/industry should take an active role in shaping the development of training programs that are designed to ensure the development of a pipeline of skilled and ready workers necessary for the support of the industry into the future. Educators must continue to engage with business/industry to ensure that curricula and training programs meet the current and future needs of industry. The educational and training system must modify its operational model to meet the needs of business/industry and working adults. This includes the development of a calendar based upon the business cycle and not the historical agrarian economy, offering flexible course schedules to meet the needs of working adults, maximizing the use of online/distance delivery technologies and ensuring course offerings/content are relevant to the current and future work environment.

Question 4d. For State workforce development directors?

Answer 4d. State workforce policy should be reviewed and revised, where necessary, to ensure full strategic alignment with the newly authorized act and to emphasize the provision of occupational skills training. State policies should ensure that resources are directed toward workforce investment system customers to the fullest extent possible while minimizing or eliminating bureaucratic processes that result in fewer resources reaching American workers.

QUESTIONS OF SENATOR ENZI

Question 1a. The growth in green jobs will require an increase in the capacity to deliver education and training to large numbers of individuals seeking to fill these green jobs. In your opinion, what is the capacity of community colleges across the country to accommodate the demand for skilled workers to fill green jobs?

Answer 1a. There are two components that make up capacity. One is instructional support and the other is tuition support for students. Colleges are facing serious fiscal constraints due to the current economic situation and students are facing rising tuition costs. Both of these will have a negative impact on capacity. The other challenge with many of these types of programs is the high equipment costs associated with developing a new technical program. With this being said, community colleges are eager to meet the demands of employers and have been historically responsive in doing so. Healthcare is an excellent example of colleges' ability to rapidly shift to programs to meet the needs of employer demand.

Question 1b. What effective models and education resources are there for community colleges to use as they adapt their programs to meet this demand?

Answer 1b. In addition to Integrated Basic Education and Skills Training (I–BEST), Opportunity Grants, and Career Navigator, Washington State has developed Centers of Excellence to help deliver education and training.

The Centers of Excellence are designed to serve as industry-specific hubs for all Washington community and technical colleges. Each Center serves as a statewide liaison to business, industry and the State's educational systems for the purpose of creating a highly skilled and readily available workforce critical to the success of the industries driving the State's economy and supporting Washington's families. Centers assist all colleges in the Washington system through the sharing of model curricula, educational pathways, degree/certificate programs and industry specific skill standards and best practices. Centers foster strong relationships with business and industry. These relationships are critical for ensuring that our education and training resources are relevant to the current work environment and meet industry's needs in terms of skill development for future workers.

Question 2. How will community colleges work with the workforce community and employers to develop the training programs necessary to prepare workers for green jobs? What professional development is there for faculty to prepare them to teach these skills?

Answer 2. Colleges have been actively working with their advisory committees, which are comprised of employers and labor representatives to identify their needs. There are also industry skills panels in place. These groups are getting ready to begin identifying training components in the areas of green economy sector jobs. Industry skills panels are public/private partnerships of business, labor and education; alliances working together to improve the skills of workers in industries vital to the economy.

These strong connections allow green-economy related programs to stay connected to the latest technical innovations in emerging areas of green-job training programs such as solar/photovoltaic. These close working partnerships with industry, as well as established relationships with university-level education programs, put community colleges in a unique position to leverage professional development opportunities. In addition, community colleges such as Shoreline budget professional development funding for faculty to keep skills fresh and relevant. To augment this dynamic process, the Washington State Board for Community and Technical Colleges (SBCTC) also recently conducted a survey to begin identifying capacity for peer training in emerging technologies. Additional faculty development is provided through a variety of conferences, workshops, institutes and training offered through the SBCTC and the Centers of Excellence, as well as through faculty learning communities.

Question 3. What strategies are there for community colleges to work with individuals who lack strong literacy skills in order for them to participate in green jobs training?

Answer 3. The 2-year colleges in Washington State recognize that individuals with low-literacy skills and other significant challenges to education and employment come from our fastest growing population groups and will make up much of the growth in our workforce for the next two generations. Because the success of these individuals will determine the economic viability of both their families and our State, Washington's community and technical colleges provide significant educational support all along education and career pathways that include:

- Adult basic education, English as a second language and GED completion classes that have as a clear goal the successful transition of adult workers into post-secondary education and achievement of the Tipping Point (at least 1 year of college credit and credential that leads to a family-wage job);
- Integrated Basic Education and Skills Training (I–BEST) programs that teach basic and job specific skills at the same time, leading to certification as an automotive service technician or a computer numerical control machinist. Both career paths are in the midst of rapid changes reflecting the commitment of these two industries to green practices;
- Opportunity Grants that provide the flexible financial support that low-income workers need in order to sit out from the workforce for at least long enough to reach the Tipping Point. Many of these adults, especially adult basic education students, do not qualify for other forms of financial aid.

All of these efforts demonstrate successful outcomes. Nonetheless, funding for training programs is inadequate to address current need and is further threatened by the economic crisis.

RESPONSE TO QUESTIONS OF SENATOR MURRAY AND SENATOR ENZI BY PHILLIP LOU

QUESTIONS OF SENATOR MURRAY

Question 1a. Before entering the program, did you do any research of your own to determine the viability of solar panel installation as a career?

Answer 1a. For many years, I have been informally educating myself through books and journals in the renewable energy field particularly Photovoltaic (PV) systems.

Question 1b. Who did you talk to about the field?

Answer 1b. I was in the process of changing careers from woodworking and carpentry to electrical. I inquired with electricians about PV installs and electrical work.

Question 1c. How did you determine that you were a good match for this field?

Answer 1c. More recently I used the Internet to search for specific training opportunities. The solarwashington.org Web site displayed only one link to training and that was Shoreline Community College. I was glad that there was a local community college that offered classes in renewable energy technologies. The course description matched my goals.

One experience that was not included in the written or oral testimony was my involvement in the Exxon Valdez oil spill in Prince William Sound, AK, 1989. I was a crew member on a support vessel and witnessed the devastating result of our dependence on oil. This is one of the many experiences that formed the values and desire to participate in the field of renewable energy technologies.

Question 2a. Since leaving the program, what has been your experience in the working world?

Answer 2a. Since I've been in the program, Artisan Electric, Inc. has hired me as a PV systems designer and installer and electrical apprentice.

Question 2b. Have you found that your career opportunities have been better (or broader) than before?

Answer 2b. Three classmates and I started our own company, Greenworks Technologies, Inc., specializing in PV, solar water heating, energy audits and weatherization, and rain catchment systems. The program brought us together, focused us on the work to be done and trained us to do the work.

Question 2c. How has your education been beneficial to starting your own business?

Answer 2c. I realize the necessity for more classes and training.

Question 3. As a practitioner in the field, how do you see the long-term viability and sustainability of the solar energy field?

Answer 3. From my perspective, I believe there are 2 elements critical to the long-term viability and sustainability of the solar energy field. They are education and incentives.

Education is key for a well-trained workforce and a well-informed populace. It is my hope that the community college system has a role in informing the general public about solar energy's potential as well as training a workforce to implement PV systems.

The recent extension of the 30 percent Federal Income Tax Credit for renewable energy projects is very helpful.

Question 4a. If you had it to do over again, would you choose the solar panel program at Shoreline again? Why?

Answer 4a. Yes, I would choose this program again. From this program, I gained the education, critical skills, confidence, and professional contacts that I feel are necessary in furthering my career.

Question 4b. What kind of support did you receive during your studies at Shoreline?

Answer 4b. The support I needed was met by my instructor and mentor, Mike Nelson, who was available to me for questions and advice.

Question 4c. What advice do you have for others interested in pursuing a "green job" and need additional training to get that job?

Answer 4c. My advice to prospective students includes both support and caution. I recommend this program to those who seek continuing education and technical

skills training. A caution is that a certain level of investment—time, energy, and money—is required.

Question 5. What recommendations do you have for improving workforce development policies?

Answer 5. From my experience, these are my recommendations:

1. Training Center—Appropriate lab building, technical library, computer lab;
2. Equipment—Solar modules, inverters, racking, and systems monitoring; and
3. Student scholarships to conferences and training—The field is changing so fast, it is vital students connect with the people and organizations. For example: NW Solar Summit, American Solar Energy Society Conference, and NW Solar Expo.

QUESTIONS OF SENATOR ENZI

Question. According to President Lambert's testimony, the Shoreline Community College has effectively partnered with employers to understand the skills training employees need to be successful in the workplace. As a graduate of Shoreline, to what extent has your education and skills training at the community college prepared you for your career? How could Shoreline have better prepared you for the green jobs in your community?

Answer. From Shoreline Community College, I've gained the critical skills, confidence, and professional contacts that are an asset to both Artisan Electric, Inc. and Greenworks Technologies, Inc. I am confident that the education and skills gained from Shoreline was the deciding factor in my employment with Artisan Electric, Inc.

The program at Shoreline was instrumental in launching my new career. The Photovoltaic Design & Install class was excellent and the only improvement that comes to mind would be more hands-on sessions but I recognize that the limitation is availability of faculty and resources.

From my experience, these are my recommendations:

1. Training Center—Appropriate lab building, technical library, computer lab;
2. Equipment—Solar modules, inverters, racking, and systems monitoring; and
3. Student scholarships to conferences and training—The field is changing so fast, it is vital students connect with the people and organizations. For example: NW Solar Summit, American Solar Energy Society Conference, and NW Solar Expo.

RESPONSE TO QUESTIONS OF SENATOR MURRAY AND SENATOR ENZI BY JOAN EVANS

QUESTIONS OF SENATOR MURRAY

Question 1. Wyoming's workforce system seems to strive for a strong connection between statewide plans for economic growth and education and job training.

How has the shift to the green economy been reflected in the State's strategic efforts to connect economic and workforce development?

Answer 1. It was an honor and a privilege to speak before the U.S. Senate Committee on Health, Education, Labor, and Pensions Committee on April 21, 2009. As the country moves forward with a green workforce, I am dedicated to addressing those opportunities and believe that Wyoming's workforce will be prepared to meet these challenges.

The Wyoming Workforce Development Council, which is the State's Workforce Investment Board, is planning to issue a Request for Proposal (RFP) utilizing up to $290,000 of the State's 15-percent set-aside funding under the ARRA to encourage training for alternative and renewable energy jobs and to train individuals for employment that leads to self-sufficiency.

Additionally, the Wyoming Department of Workforce Services is partnering with the State's Labor Market Information agency (the Research and Planning Section of the Wyoming Department of Employment) to develop future projections of labor needs across all industry sectors. Current projections are largely based on historical trends, which may not be highly reliable indicators of future growth. The Research and Planning Section is also working to more fully understand the impact of green jobs among the LMI community, education, and economic and workforce development partners. In addition, the Department of Workforce Services and Workforce Development Council are working closely with the Wyoming Business Council (the State's economic development agency) to address challenges of all businesses within key industry sectors.

Further, the Department is collaborating with the Wyoming Department of Family Services and the Wyoming State Energy Office in seeking enhanced training options for weatherization and energy efficiency providers, since more weatherization dollars are flowing to Wyoming as a result of ARRA.

Question 2a. The workforce system helps workers and employers connect the dots between education and training, career choice, and the value of skilled workers to businesses and economic development.

How has the existing system in Wyoming served as the foundation for your efforts to provide training for green jobs in the State?

Answer 2a. The Department in 2008 began pursuing a strategy called Industry Partnerships Solutions which encourages the creation of partnerships involving multiple businesses within the same industrial sectors. Other key players in these industry partnerships are education/training entities and economic development. These types of partnerships bring together key workforce development players whose primary goals are to determine workforce needs across an industry such as recruitment, retention, marketing for the industry, and management training. Through these partnerships, public workforce development and education dollars are better focused to help multiple businesses within any industry sector, including emerging green industries.

The Department actively supports programs such as CLIMB Wyoming and Dads Making a Difference—programs that help move people out of poverty and into good-paying jobs. A variety of job training and life skills counseling is offered to clients, and these programs are poised to integrate green job skill attainment into their training programs.

In addition, the Department is aggressively promoting the Wyoming Career Readiness Certificate—a document that verifies a job seeker's skill levels based on the WorkKeys™ assessment. WorkKeys™, which is already a qualifying component of our State student college scholarship program, was devised by ACT Inc. to gauge "real world" work skills in math, reading and locating information. Similar initiatives in other States have proven effective in helping provide a better match between job seekers and employers, and in reducing turnover, recruitment and hiring costs for businesses. ACT has matched WorkKeys™ scores to the skill needs of thousands of occupations, and using such job "profiles" for green jobs can further help provide workers for these new industries.

The Industry Partnerships Solution, combined with the self-sufficiency training programs, Career Readiness Certificate initiative and ongoing WIA and Wagner-Peyser funding activities at our Workforce Centers will keep Wyoming responsive to not only green industry needs but workforce needs in all industries.

Question 2b. Have you found that workers and industry leaders are somewhat confused about how to approach training for green jobs?

Answer 2b. While the Department of Workforce Services is generally taking the same worker training approach to all types of industry workforce training needs—green or otherwise—some confusion exists among the general public over the difference between green jobs and green skills. For example, if a person has welding skills and takes a job building electric transmission line towers that will transmit power generated by wind turbines, does that person have green skills? If not, is he at least working at a green job?

At the education level, Wyoming has seven community colleges and each has recently focused on different aspects of what it considers "green training." Most of these green training programs have been developed with industry help, focusing primarily on renewable energy and wind power. For example, the Wind Technician Program at Laramie County Community College in Cheyenne is expanding enrollment to 75 students per year. This program was launched through a USDOL grant. The Department of Workforce Services, through WIA funding, has sent many students into the program.

Other green programs offered by our colleges include an Energy Rater Training Seminar, which provides course work and test preparation for the Residential Energy Services Network Energy Rater Certification exam; Energy Efficient Residential Contractor Training, which provides two-day training for installation of windows, doors, and insulation for individuals interested in starting or expanding their own contracting business; and Green Landscaping, which offers a workshop on landscaping to benefit the environment and save water and energy. Another program focuses on land reclamation after traditional mining operations have ceased.

Question 2c. What do you think the Department of Labor could do to help your system better meet the needs of workers and employers for the green economy in Wyoming?

Answer 2c. The Department of Workforce Services would like clarification on what truly could be considered a "green industry" and "green training." To offer another example: If an electrician receives training to work on a wind farm, and only works at the wind farm 20 percent of the time, does that qualify that electrician and the

required training as a green job? There is too much left unknown on what can be considered "green training" and "green skills" which could be better defined by the Department of Labor.

Question 3a. Many workforce leaders across the country have expressed some concern about their ability to understand the changing science and policy world surrounding green jobs. While they clearly understand the best way to help workers access training and job counseling, they're concerned that those two worlds—energy and environmental policy, and workforce development—are going to be tough to align.

As a leader in the field, have you experienced this disconnect or heard concerns from experts in your State about meeting the expectations of a green economy?

Answer 3a. The responses provided to question 2b above also apply here, but I would like to elaborate. Some leaders from traditional (fossil-fuel based) energy industries have shown reluctance to "buy in" to training for green jobs because they are unsure of the definition of green jobs and the implications for their own industries. They are wondering why they should support green jobs if such support would threaten or undermine their own industries, such as coal mining or oil and gas extraction, which will remain an integral part of our Nation's energy mix for years to come.

Also, the ability to provide workers for green industries is further complicated by many unknowns as the impacts of emerging industries, such as wind, become more evident. On May 19, Wyoming Governor Dave Freudenthal sent a letter (attached) to a new legislative task force outlining his concerns about the impact of wind turbines on crucial habitat for sage grouse and sensitive species, the benefit to local and State governments, and the effect on private property owners. How these concerns are addressed or resolved will largely determine the rate of wind farm development in our State, and subsequently, the numbers of trained workers that will be needed to sustain and grow the industry.

Question 3b. What kind of partnerships are you building at the State level to ensure that leaders in the energy and environmental field and those of you in workforce development maintain open and constructive lines of communication to ensure success for workers and local businesses?

Answer 3b. The Wyoming Workforce Development Council is a great example of a public-private partnership in that both businesses and governmental agencies are represented on the Council. Private sector individuals comprise more than 51 percent of membership of the Council and also chair four of the Council's five committees—Talent Pipeline, Sector Strategies, Communication and Evaluation.

In addition to Council representation, the Industry Partnership Solutions, as discussed in my response to question 2a, is another proactive measure to maintain dialogue with the private sector.

Question 4a. What recommendations do you have for the Department of Labor to improve their service to workforce leaders helping workers access training for green jobs?

Answer 4a. As mentioned in the response to question 2c, we would prefer that DOL define green jobs, and clarify the difference between green jobs and green skills. It may even be beneficial not to use the term "green" but utilize terms as "renewable" or "alternative" energy jobs. "Green" has negative connotations in many circles, particularly in Wyoming where "non-green" job-holders feel uncertain about the future of their jobs in the current discussion. Many energy, policy and scientific experts believe it will not be possible to immediately and completely switch from coal-based electricity generation to renewable energy-based power, particularly in light of the fact that 50 percent of our Nation's power comes from coal, and that many power plants and the Nation's transmission infrastructure are still coal-dependent.

The Department also believes there is a need for a national branding program for all activities related to workforce development. The names of workforce development agencies vary from State to State, and a common brand would help educate industry and potential workers about services available at workforce centers, and help promote job opportunities in green industries.

We urge stronger partnerships among the Departments of Labor, Energy and Education to streamline and remove duplication in workforce development efforts.

Question 4b. For Congress as they work to reauthorize the Workforce Investment Act?

Answer 4b. Make sure that DOL has discretionary grant funding to provide incentives for green training programs.

Allow Federal workforce development dollars (Wagner-Peyser, WIA, etc.) to be appropriated in block grants to States which desire to combine those dollars. Eliminate staff reporting requirements for DOL-funded programs that have the same general purpose. In rural States like Wyoming, the same person may be performing both Wagner-Peyser and WIA functions and is currently required to report time spent on each. Whether the local staff is providing assistance for potential green industry employees or for traditional career workers, this multiple reporting requirement is redundant and inefficient.

Generally, we would ask that Congress be mindful that our agency will respond to any type of job creation—green or otherwise; if the green jobs are there, we will help individuals obtain training and we will work with businesses and our partners to build career ladders and career pathways for employees in green industries.

Question 4c. For businesses and educators engaging in the green economy?

Answer 4c. Again, clear definitions and informed projections of job creation and needed job skills would be immensely helpful for business people and educators. A database of green job training providers would also be helpful.

There is also a need for the public to be better educated on the facts surrounding green jobs. How many jobs can realistically be expected? What data do we have on the number of green jobs that will be generated and sustained for the long term? What are the trades-offs? Which jobs are truly environmentally friendly and which ones are creating more environmental problems than they solve? What incentives, tax breaks or otherwise, exist that would encourage green job creation? What indicators give us relative comfort that the green training will result in an individual securing a good-paying, long-term job?

Question 4d. For other State workforce development directors?

Answer 4d. Put in place a mechanism for all stakeholders to be at the table. Encourage and incentivize States and regions to develop green industry partnerships that include private and public entities whose missions include development of a skilled workforce.

Share best practices from States that have been able to develop talent pipelines within green industries—including successful efforts to recruit, train and retain skilled workforces.

Create an informational database indicating demand for green jobs within geographic regions and specific industries, along with potential starting wages and training providers.

QUESTIONS OF SENATOR ENZI

Question 1. As the head of a State agency for workforce development, how do you view green job skills training for workers in the larger context of workforce development in the State?

Answer 1. We view green job training, however it is defined, as just one component in the larger realm of worker training. Our agency desires to find skilled workers for new and emerging industries—green or not—to help diversify our economy and reduce dependency on the traditional minerals sector as the main revenue source for State and local government, and to create a wider variety of higher paying jobs for our citizens. We continue to be both reactive and proactive—reactive by responding to needs of businesses as they contact us; proactive in maintaining ongoing dialogue with businesses and working actively to promote industry partnerships. These types of partnerships are aimed at streamlining government services to industry and to workers, and to help arrive at common solutions within and across industry sectors.

One concern is the ability for training/education entities to quickly develop curriculum needed by industry. The current education system requires any new credited program through the community colleges to receive approval from the Wyoming Community College Commission, which only meets quarterly. If a training program is requested by an industry and needs to be developed quickly in partnership with the community colleges, there are concerns on how quickly they will be able to respond to those needs. While this is mainly a State issue, it may be helpful to understand this possible bottleneck in the ability of colleges to quickly deliver training.

Question 2. How have Workforce Investment Act funds been used, if at all, in Wyoming for green skills training? What models have been adopted in Wyoming that might be useful for others to use in their States?

Answer 2. We plan to use WIA funds to connect individuals dependent on public assistance with training in green job and other work skills through RFPs in the summer of 2009. WIA funds are also used to help many individuals take the

WorkKeys™ assessment and obtain a Wyoming Career Readiness Certificate—a valuable tool that informs employers of a job seeker's skill levels.

A program which could serve as a model to other States is one that is State-funded—the Workforce Development Training Fund. It offers grants to businesses to train existing workers or train people for jobs that will be created by a company's expansion or re-location to Wyoming.

Question 3. You heard Secretary Solis say that green jobs will provide economic security for our middle-class families. In your experience in Wyoming, what kinds of jobs are being created in light of the emphasis on green jobs? Are these the kinds of jobs that the Secretary was referring to?

Answer 3. The Department of Workforce Services is supporting two community college programs that are developing wind energy technicians. The starting wage for many of these jobs is $20.00 per hour, so these positions definitely benefit middle-class families and are the types of jobs to which Secretary Solis was referring. Wyoming is among the top States for wind capacity, so our agency's support—through direct referrals of clients or by word-of-mouth—is fitting. Also, many wind farms have already come on line or are in the planning stages in our State, and wind energy will occupy an increasing share of the State's economic and energy portfolio.

[Whereupon, at 12:27 p.m. the hearing was adjourned.]

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