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U.S. Senate Committee on Environment and Public Works Field Hearing
"Clean Energy Jobs and American Power Act"
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Thank you, Senator Specter, for convening this very important hearing regarding climate change legislation. Your leadership on this issue is critically important as our nation and our state grapple with the fundamental question of protecting the environment while also protecting jobs and the health of the economy.

I am Steven Winberg, Vice President of Research and Development for CONSOL Energy.

CONSOL Energy is the largest U.S producer of high-Btu bituminous coal and the largest producer of natural gas in the Appalachian Region. We hold more than 6 decades of proven and recoverable coal reserves, or more than 4.5 billion tons. We employ more than 2,300 people in Pennsylvania whose families and communities depend on coal for their livelihood. As you know Senator, the coal industry is a very capital intensive industry. The multiplier effect for our industry is significant. For every coal job there are at least five jobs that support it.

From your advocacy on behalf of our National Energy Technology Lab here in Southwestern Pennsylvania to your being our champion in securing necessary investment for our locks and dams to move coal to the customer and other commerce up and down the upper Ohio River, your efforts on behalf of the industry are greatly appreciated.

CONSOL also operates the largest, privately funded Research and Development facility in the nation, right here in Pittsburgh, dedicated specifically to coal, including advanced technology for coal and coal bed methane production and utilization. We are committed to developing technologies that reduce the amount of carbon being released into the atmosphere from the use of our products. We currently have about $54 million of research projects underway specifically to burn coal more cleanly and more efficiently.

In fact, we were recently awarded $1 million by the Pennsylvania Energy Development Authority to continue investigation of clean coal technologies that have the potential to reduce greenhouse gases while also reducing stockpiles of waste coal. Testing is currently underway with a pressurized fluidized bed combustion system and a novel carbon capture system capable of removing approximately 95% of the CO_2 emissions. The potential of this system cannot be understated as it could be adapted to older coal-fired power plants, allowing these plants to continue to contribute needed power as clean, or cleaner, than a newly constructed plant.

This is just one example of the exciting technology developments that are occurring in the private sector as we speak. It is important to note that we are not searching for a "silver bullet" technology. Because each of the coal-fired power plants in the existing fleet has at least some unique characteristics, we seek to promote the development of as broad a menu of technology solutions as possible.

Your efforts in the area of Carbon Capture and Sequestration (CCS) technology should be commended. Your work in the Senate to increase funding, to provide a liability framework and to address performance standards for CCS are critical components to the future of coal and the future of the Pennsylvania economy.

Coal is our most abundant domestic energy resource and we need sustained, predictable investment in CCS coupled with time to develop, demonstrate and commercialize it effectively.

However, there is a key overarching issue. If the legislation forces significant reductions in U.S. greenhouse gas emissions before these new technologies are commercially deployable, we will negatively impact a significant part of the existing fleet of coal-fired plants. Moreover, without allowing the necessary time to develop and fully deploy CCS, some promising technological developments may be short-circuited.

If we do not allow the time necessary to fully develop these technologies, consumers will see increases in retail power costs, and when the economy has fully recovered, it is likely that reliability on the U.S. power grid will be threatened.

If we do not allow the time necessary for American innovation to fully develop these technologies, we will likely find ourselves at a significant global competitive disadvantage.

And, finally, if we do not allow the time necessary to fully develop these technologies, we will lose an important opportunity to export these technologies. The export potential for advanced coal technologies is tremendous.

Although we are discussing legislation that will primarily impact U.S. energy markets, it is important to keep in mind the global context. According to the World Coal Institute, coal fuels almost 40% of electricity worldwide. In many nations, this figure is much higher. Poland, for example, relies on coal for over 94% of its electricity generation and China 77%.

The U.S. consumes nearly one billion tons of coal each year and global consumption is almost four billion tons. Coal use is expected to grow to seven billion tons by 2030 with China responsible for nearly half of that growth.

Over the next 20-30 years, we expect staggering growth in electricity production and consumption as developing countries strive to reach a standard of living similar to the developed nations of the world. These countries have made clear that they intend coal to play a major role in their growth.

The significance of this is obvious. Considerable CO_2 reductions will not be achieved by substituting renewable energy for fossil energy, or by relying heavily on conservation. Fossil fuels will remain a significant part of the world's energy portfolio for years to come. These technologies, that I believe we can develop here in the United States, can make an important *global* contribution to reduction in atmospheric CO_2 levels, *if* we structure our policies correctly.

Archtecture matters. The leadership you have exercised in the area of coal's technology needs will assist in reducing GHG's globally and will assist in creating jobs here at home to develop and deploy the advanced coal technology for tomorrow's energy future IF we get these other policy components right.

In order to realize this potential, there is one other element that must be in the conceptual framework of this bill. We believe cost containment must be addressed in a more significant way than we have seen thus far. If the EPA or CBO estimates prove to have understated the level to which emission allowance prices will rise, then the impacts to the economy will be very

damaging. As a result, we believe that further cost containment measures are needed to protect the health of the U.S. economy and, in particular, the Pennsylvania economy.

Congressional Budget Office Director Elmendorf, in testimony before the Senate Energy and Natural Resources Committee last Wednesday, said that while the development of new technologies and the growth of renewable energy to "replace" fossil fuels will largely offset job losses elsewhere, "The shifts will be significant". However, that analysis ignores the loss in manufacturing or other energy intensive industry jobs that will be shifted overseas as U.S. energy prices rise.

Nowhere would such a "shift" be more pronounced and felt with more of a negative impact than here in Southwestern Pennsylvania. We have seen estimates that net job loss could exceed 80,000 on a statewide basis, with southwestern Pennsylvania shouldering a significant part of that burden. In fact, H.R. 2454 even has a provision in the bill that "provides for payment of a climate change adjustment allowance to an adversely affected worker covered by a certification under section 425(b) who files an application for such allowance for any week of unemployment which begins on or after the date of such certification."
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This appears to me to be explicit policy recognition of the adverse impact on jobs, and the national economy. That is why we believe any legislation must contain meaningful cost containment provisions.

Your leadership and thoughtful consideration of these issues are sorely needed and we, again, thank you for your laudable efforts to improve the legislation currently before the Environment and Public Works Committee.

If we fail to get this right, we may create economic problems that will make our current circumstances pale in comparison.

Thank you for this opportunity and I will be happy to answer any questions.