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Statement on behalf of the
United Mine Workers of America, AFL-CIO
Before the
Energy and Air Quality Subcommittee
Committee on Energy and Commerce
U.S. House of Representatives
July 10, 2008
HR 6258, "Carbon Capture and Storage Early Deployment Act"

Chairman Boucher, Ranking Member Upton and distinguished members of the Subcommittee:

I am pleased to be here today to testify on behalf of the United Mine Workers of America (UMWA), the labor union representing the nation's organized coal miners. I have represented the UMWA in clean air and global climate change issues for some 20 years. A copy of my bio is Attachment 1, and a summary of my statement is Attachment 2 hereto.

The UMWA is here to support enactment of HR 6258, the Carbon Capture and Storage Early Deployment Act. HR 6258 provides an essential foundation for national climate change legislation by establishing a secure, non-budget source of financing for demonstrating the technical and commercial feasibility of carbon

capture and storage (CCS) technologies. CCS technologies are the <u>only</u> means for assuring that domestic coal can continue to supply the majority of our electric generating needs in a carbon-constrained environment. The UMWA also regards CCS technologies as a major potential source of new well-paying "green" jobs involving a wide range of skills.

#### **Background**

First, let me offer a few historical facts that underpin the UMWA's support for HR 6258. Since 1990, the UMWA has lost thousands of coal mining jobs as a consequence of fuel-switching in response to the market-based acid rain provisions of Title IV. The union fought, but ultimately lost, a 10-year legislative battle to require large electric utility coal plants to install available scrubber technologies to reduce their sulfur emissions. Coal production in major eastern coal producing states declined by more than 113 million annual tons between 1990 and 2000, while more than 30,000 coal mining jobs were lost. Most of these job losses were the result of switching from higher- to lower-sulfur coals to meet the emission reductions required by Title IV. Dozens of mining communities have all but ceased to exist across economically-depressed Appalachia and the rural Midwest. The UMWA is intent upon avoiding a repeat of this history.

The UMWA supports national climate change legislation. The UMWA also recognizes that imprudent climate change legislation potentially represents the

greatest threat to its membership and to the continued use of coal. This is why the UMWA views HR 6258 as an essential component of an overall legislative approach to climate change.

The UMWA and the AFL-CIO endorsed the bipartisan Bingaman-Specter climate change bill (S.1766) in July 2007. That bill provided an appropriate balance of technology incentives, reasonable emission reduction targets and timetables, and safeguards for the economy. Unlike the climate bill recently debated by the Senate, S. 1766 would not lead to wrenching changes in energy markets or to widespread job losses throughout the economy.

## The Role of Coal in America's Energy Supply

Coal is an indispensable part of America's energy supply. The U.S. has a demonstrated coal reserve base of over 500 billion tons, with an estimated 275 billion tons of recoverable reserves. Our recoverable coal reserves have the energy equivalent of about one trillion barrels of oil, an amount comparable to the world's known oil reserves.

More than one-half of our nation's electricity is generated by coal, principally in baseload plants. Intermittent renewables such as wind cannot replace baseload coal, and usually are backed up with natural gas. To reduce coal in our energy supply mix means using another fuel to replace it for baseload generation, most likely a combination of nuclear and natural gas. Such a

fundamental shift in U.S. energy policy would bring into question not only the cost but also the availability of natural gas supplies. Substantial increases in demand for natural gas inevitably would lead to much higher electric generation costs and greater dependence on foreign sources for supply. At the margin, our gas supplies are imported from Canada and from unstable foreign markets in the form of LNG. Current LNG imports are economically limited because the prices of LNG are soaring due to demand from the EU.

Natural gas futures prices now exceed \$14 per million BTU at the wellhead for February 2009 delivery, and persist at levels above \$10 for purchases several years into the future. Environmental policies that drive electric utilities away from coal – which DOE/EIA projects will cost less than \$3 per million BTU delivered to electric power plants in 2008<sup>2</sup> - conflict not only with our energy policy goal of maintaining a reliable, low-cost mix of generating sources, but with fundamental national security and defense interests.

The UMWA also recognizes that Americans demand a cleaner environment at the same time they demand low-cost energy. HR 6258 represents a major step forward in advancing the technologies that will allow coal to be consumed in an environmentally benign manner. It will help us, once and for all, to put to rest the myth of "dirty coal."

<sup>1</sup> See, http://futures.tradingcharts.com/marketquotes/NG.html (July 4, 2008).

<sup>2</sup> DOE/EIA, Short Term Energy Outlook (June 8, 2008).

#### The UMWA Supports HR 6258

HR 6258 is based on the unanimous recommendations of the U.S. EPA Advanced Coal Technology Work Group (ACT). In January 2008, U.S. EPA's ACT Work Group, representing a broad array of industry, state and environmental stakeholders, including the UMWA, unanimously recommended that Congress create a Carbon Capture and Storage Early Deployment Fund to defray the additional costs and risks of these technologies.

The ACT Work Group recommended raising approximately \$1 billion annually through non-budget mechanisms such as temporary fees on fossil-fueled electricity to support creation of an Early Deployment Fund.

HR 6258 promises to translate these recommendations to reality. It calls for the creation of an industry-operated Carbon Storage Research Corporation to assess and collect modest fees on electricity produced from fossil-fueled coal, oil and gas. Approximately \$1 billion would be raised annually for a period of 10 years, to be applied directly to projects that will accelerate the commercial demonstration of CCS technologies.

Associations representing electric utility distribution companies are to conduct referenda among their members on assessment of the fees. If owners representing 67% of the total amount of fossil-fueled electricity approve the fees, the program takes effect.

The proposed fees are based on the relative carbon dioxide emissions of coal, oil and natural gas. The ACT Work Group estimates that the fees would increase electric rates by approximately 0.6 percent among electric customers. On a national level, the fees amount to less than \$10 a year per household. We note that an assessment of \$1 billion annually on consumer electric bills would represent about one-third of one percent of the \$326 billion annual retail sales of the electric power industry in 2006. This is a very small insurance premium for preserving coal as a viable and environmentally benign source of domestic energy, particularly among the vast majority of states that rely on coal for substantial portions of their electric power.

HR 6258 authorizes the Electric Power Research Institute (EPRI), an independent 501(c)(4) corporation, to create a separate subsidiary to operate the Corporation. The Corporation would be directed by a Board of twelve members representing diverse utility groups and fossil fuel producers. The Board would interact with EPRI's Public Advisory Committee. The Board of Directors is authorized to issue grants or contracts to large-scale projects that would help demonstrate the technical and commercial feasibility of CCS technologies. Reverse auctions also may be used to purchase tons of CO<sub>2</sub> from operational projects.

The bill directs that projects to be supported should be geographically diverse, using a variety of coal and other fossil fuels, and employing carbon

capture technologies that could be used on new or existing power plants.

HR 6258 provides for a mid-course review by the Government Accountability Office, with a report to Congress on the Corporation's success in advancing the commercial demonstration of CCS technologies. It also provides for potential support to U.S. DOE and academic programs focused on CCS, including the Regional Carbon Sequestration Partnerships.

The UMWA envisions an active working partnership among the Corporation, U.S. DOE and its national labs and other research entities, collectively supporting major projects that have the greatest promise of demonstrating the technical and economic feasibility of CCS. DOE's recent restructuring of the FutureGen program to focus on CCS applications suggests precisely this kind of cooperation.

#### The Need for Accelerated CCS Demonstrations

CCS technology will store carbon dioxide emissions from power plants underground in deep storage sites, such as saline aquifers and shale formations. The U.S. is estimated to have several hundreds of years of storage potential at many locations across the nation.

Adequate federal funding is not available to accelerate the development of carbon capture and sequestration as a commercial option for meeting greenhouse gas reduction goals. The MIT report, *The Future of Coal* (2007), stressed that:

"Today, and independent of whatever carbon constraints may be chosen, the priority objective with respect to coal should be the successful large-scale demonstration of the technical, economic, and environmental performance of the technologies that make up all of the major components of a large-scale integrated CCS system — capture, transportation and storage.

MIT also concluded that current funding for advancing CCS was "completely inadequate":

"At present government and private sector programs to implement on a timely basis the required large-scale integrated demonstrations to confirm the suitability of carbon sequestration are completely inadequate. If this deficiency is not remedied, the United States and other governments may find that they are prevented from implementing certain carbon control policies because the necessary work to regulate responsibly carbon sequestration has not been done."

## **Relationship of CCS to Climate Change Legislation**

The UMWA's support for the Bingaman-Specter bill reflects agreement with its emission reduction targets and timetables, incentives for the commercialization of CCS technologies, projected moderate impacts on the U.S. economy, and on coal utilization in the electric utility sector. Striking the right balance among these variables is essential for the welfare of American consumers and workers.

The U.S. must take the lead in establishing the technical and commercial viability of CCS technologies for use both here and abroad. The world's ability to stabilize global CO<sub>2</sub> concentrations – the long-term goal of the U.N. Framework Convention on Climate Change - depends largely upon the willingness of major developing economies like India and China to accept meaningful commitments to reduce their future rate of emissions. These countries have vast coal reserves, and will continue to rely upon them to support their economic development.

The UMWA wishes to bring to the Subcommittee's attention the potential consequences of climate change legislation that does not provide adequate time or incentives for the full commercial deployment of CCS technologies. The union did not support S. 2191 primarily due to its adverse impacts on the economy and on American workers. Most of these impacts resulted from the bill's unrealistic schedule of emissions reductions required by 2020, just 12 years from now. Recent analyses by U.S. EPA<sup>3</sup> and DOE/EIA<sup>4</sup> confirm our judgment in this regard.

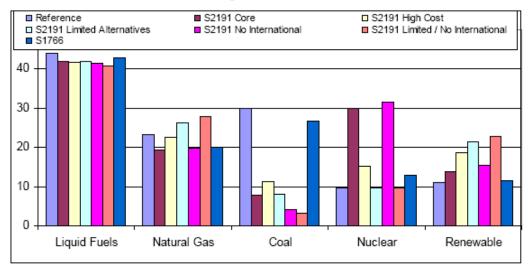
Both EPA and EIA's analyses of S. 2191 indicate that U.S. coal production for electric generation would be curtailed sharply, mainly reflecting the low availability of CCS technology to meet the bill's target of a 15% reduction below 2005 emissions by 2020. The following EIA chart summarizes the bill's impacts

<sup>3</sup> U.S. EPA, "Analysis of the Lieberman-Warner Climate Security Act of 2008 (March 14, 2008).

<sup>4</sup> U.S. DOE, Energy Information Administration, "Energy Market and Economic Impacts of S. 2191, the Lieberman-Warner Climate Security Act of 2007 (April 2008).

on coal utilization in 2030 for alternative cases, including a comparison to the Bingaman-Specter bill (S. 1766):

Primary Energy Consumption by Fuel in 2030, S. 2191 Cases and S. 1766 Update (In quadrillion BTUs)



Source: DOE/EIA, n.4, Figure ES-1.

The table below summarizes EIA's findings for electricity generated by coal and natural gas under its business-as-usual Reference Case, Core S. 2191 case, and "Limited Alternatives" case for 2020 and 2030. EIA's core case assumes that nuclear generation will triple by 2030. The limited alternatives case constrains coal-based CCS, new nuclear power, and renewables generation to reference case levels.

EIA S.2191 Projections of Coal and Natural Gas Electric Generation, 2020 and 2030 (Billions of Kilowatt-Hours and Pct. Chg. from 2006)

	2006	2020	2020	2020	2030	2030	2030
		Ref.	Core	Ltd.	Ref.	Core	Ltd.
		Case	Case	Alter.	Case	Case	Alter.
Coal	1,988	2,357	1,890	1,606	2,838	703	703
		+19%	-5%	-19%	+20%	-65%	-65%
N.Gas	806	833	761	1,094	741	427	1,558
		+3%	-6%	+36%	-8%	-47%	+93%

Source: DOE/EIA, n.4, Table ES2.

These findings, showing a 65% reduction in coal use in both the core and limited alternatives cases from 2006 levels, underscore UMWA's concerns about the impacts of overly aggressive climate change targets and timetables when CCS is not commercially available on a widespread basis. EIA projects huge increases in the demand for natural gas in the limited alternatives case, with adverse implications for other industries and consumers dependent on scarce gas resources. If EIA's core case assumptions about the robust growth of nuclear power proved optimistic, utilities would have little choice but to switch from coal to natural gas on a massive, unprecedented scale.

EPA's results for S. 2191 are consistent with EIA's findings. EPA projects that coal production for electric generation would decline from 1.1 billion tons in 2010 to less than 800 million tons in 2020, and to less than 700 million tons by

2025 – a reduction of nearly 40% from 2010 production.<sup>5</sup> This is simply not an energy future that this nation can afford.

#### Conclusion

HR 6258 takes a critical step forward in advancing the commercial readiness of CCS technologies to enable coal and other domestic fossil fuels to continue to supply the nation's electric generation needs. The bill is not a substitute for national climate legislation, but lays the foundation necessary for our nation to reduce its carbon footprint without increasing our dependence on unstable foreign energy supplies such as imported LNG.

It is not reasonable to expect that we can depend entirely upon the appropriations process to deliver the magnitude of financial support needed to address the challenges of commercializing CCS technologies. HR 6258 provides a more secure and stable form of long-term resource support, potentially capable of providing the bases for independent private financing of a variety of coal-based energy technologies that otherwise might never get off the drawing board.

The UMWA thanks the Chairman, the Ranking Member, and the Subcommittee for their consideration of its views.

<sup>5</sup> U.S. EPA, n.3, at 46.

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Mr. Trisko has a B.A. in economics and politics from New York University (1972) and a J.D. degree from Georgetown University Law Center (1977). He is admitted in the District of Columbia, and has appeared before the U.S. Court of Appeals for the D.C. Circuit in matters concerning the Clean Air Act. He has lectured on the Clean Air Act and climate change at Penn State University, the University of Virginia, and West Virginia University College of Law.

Mr. Trisko was active on behalf of the United Mine Workers of America in the reauthorization of the 1990 Clean Air Act Amendments. He has participated as an NGO on behalf of the UMWA in all United Nations climate change negotiating sessions since the 1992 Rio Earth Summit. In 2006 and 2007, he represented the UMWA in mercury proceedings in Pennsylvania, and in the Illinois Climate Change Advisory Group. He currently represents the Illinois AFL-CIO, the UMWA and IBEW local unions in the Midwest Governors' Association climate initiative.

Mr. Trisko is a member of U.S. EPA's Clean Air Act Advisory Committee. He served on EPA's Mercury MACT Work Group from 2003 to 2005, and on the Advanced Coal Technology Working Group in 2007-08. In 2000 and again in 2007, he was appointed by the U.S. Department of State to represent U.S. labor and stationary source interests as a member of the U.S. Delegation in bilateral air quality negotiations with Canada.

Mr. Trisko is the author of more than 20 articles on energy, climate and clean air policy issues published in environmental and law journals. Before entering private practice, he served as an attorney with the Federal Trade Commission, and as an energy economist. He has appeared as an expert witness on utility cost of capital before several state public service commissions.

# Summary Statement of Eugene M. Trisko on behalf of the United Mine Workers of America, AFL-CIO July 10, 2008

## HR 6258, "Carbon Capture and Storage Early Deployment Act"

I am pleased to be here today to testify on behalf of the United Mine Workers of America (UMWA) to support enactment of HR 6258.

HR 6258 provides an essential foundation for national climate change legislation by establishing a secure, non-budget source of financing for demonstrating the technical and commercial feasibility of carbon capture and storage (CCS) technologies. CCS technologies are the <u>only</u> means for assuring that domestic coal can continue to supply the majority of our electric generating needs in a carbon-constrained environment.

The UMWA supports national climate change legislation. The UMWA is mindful, however, that imprudent climate change legislation potentially represents the greatest threat to its membership and to the continued use of coal. That is why the UMWA strongly supports HR 6258 as an essential component of an overall legislative approach to climate change.

Coal is an indispensable part of America's energy supply. More than one-half of our nation's electricity is generated by coal, principally in baseload plants. Intermittent renewables such as wind cannot replace baseload coal, and usually are backed up with natural gas. At the margin, our gas supplies are imported from Canada and from unstable foreign markets in the form of LNG.

HR 6258 is based on the unanimous recommendations of the U.S. EPA Advanced Coal Technology Work Group (ACT). In January 2008, the ACT Group recommended raising approximately \$1 billion annually through non-budget mechanisms such as temporary fees on fossil-fueled electricity to support early commercial demonstrations of CCS technologies.

HR 6258 promises to translate these recommendations to reality. It invites industry associations to approve the creation of a Carbon Storage Research Corporation to assess and collect modest fees on electricity produced from coal, oil and gas. Approximately \$1 billion would be raised annually for a period of 10 years. The bill directs that projects to be supported should be geographically diverse, using a variety of coal and other fossil fuels, and employing carbon capture technologies that could be used on new or existing power plants.

The bill provides for a mid-course review by the Government Accountability Office. It also provides for potential support to and cooperation with U.S. DOE and academic programs focused on CCS, including the Regional Carbon Sequestration Partnerships.

The U.S. must take the lead in establishing the technical and commercial viability of CCS technologies for use both here and abroad. India and China have vast coal reserves, and will continue to rely upon them to support their economic development.

It is not reasonable to expect that we can depend entirely upon the appropriations process to deliver the magnitude of financial support needed to address the challenges of commercializing CCS technologies. HR 6258 provides a more stable form of long-term resource support, potentially capable of providing the bases for independent private financing of a variety of coal-based energy technologies that otherwise might never get off the drawing board.