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THE IMPACTS OF EPA'S PROPOSED CARBON REGULATIONS ON ENERGY COSTS
FOR AMERICAN BUSINESSES, RURAL COMMUNITIES AND FAMILIES, AND A
LEGISLATIVE HEARING ON S. 1324

TUESDAY, JUNE 23, 2015

U.S. SENATE

Committee on Environment and Public Works

Subcommittee on Clean Air and Nuclear Safety

Washington, D.C.

The subcommittee met, pursuant to notice, at 2:05 p.m. in room 406, Dirksen Senate Building, the Honorable Shelley M. Capito [chairman of the subcommittee] presiding.

Present: Senators Capito, Carper, Barrasso, Crapo, Sessions, Fischer, Merkley, Markey and Inhofe.

STATEMENT OF THE HONORABLE SHELLEY M. CAPITO, A UNITED STATES
SENATOR FROM THE STATE OF WEST VIRGINIA

Senator Capito. I am going to go ahead and begin.

I know Senator Carper is planning to be here. When he gets here, we will make time for him to make his opening statement. In the interest of the panelists and other Senator, I think it would be best to go ahead and move on.

I want to welcome everyone to the hearing of the Clean Air and Nuclear Safety Subcommittee. The hearing is entitled The Impacts of EPA's proposed Carbon Regulations on Energy Costs for American Businesses, Rural Communities and Families, and a legislative hearing on my bill, S. 1324, better known as the ARENA Act, Affordable Reliable Electricity Now Act.

I introduced ARENA in May and am proud to have more than 30 co-sponsors, including Leader McConnell, Chairman Inhofe, and all my fellow Environment and Public Works Committee Republicans. I introduced ARENA and am holding this hearing today because of the devastating impact that EPA's proposed regulations will have on the families and businesses in my home State of West Virginia and across the Nation.

I am not exaggerating when I say almost every day back home in West Virginia, there are new stories detailing closed plants, lost jobs, and price increases. I have a letter here sent to me by Ammar's Inc., a family-owned company that operates 19 Magic

Mart stores in West Virginia, Virginia and eastern Kentucky. The letter is accompanied by a petition signed by 26,000 Magic Mart customers, calling on EPA to end its war on coal and catastrophic impact on local economies.

Ammar's Inc. has been active in the region for 95 years, and according to this letter, the present economic crunch is the most difficult challenge the company has faced. Let me quote directly: "There was a time when your greatest obstacle was your competitor, but if you worked hard, took care of your customers and offered quality merchandise at a fair price, you could compete successfully. Unfortunately, that is now not the case. The largest impediment we have to operating our business successfully is our own government, particularly the EPA. The rulings issued by the EPA have devastated our regional economy."

Coal provided 96 percent of West Virginia's electricity last year. West Virginia had among the lowest electricity prices in the Nation. The average price was 27 percent below the national average, but that advantage will not survive this Administration's policies. Studies project our electricity prices will between 12 and 16 percent.

Earlier this month, 450,000 West Virginians learned of a 16 percent increase in the cost of electricity. While there were multiple factors that contributed to this rate increase, compliance with previous EPA regulations played a significant

part. If we allow EPA's plan to move forward, last week's rate increase will only be the tip of the iceberg.

Affordable energy matters. The 430,000 low and middle income families in West Virginia, nearly 60 percent of our State's households, take home an average of less than \$1,900 a month and spend 17 percent of their after-tax income on energy. These families are especially vulnerable to the price increases that will result from the Clean Power Plan.

This is not just about the impacts on coal producing States like West Virginia. This is about the impacts across the United States.

It is important to note that all electricity has to come from somewhere. In many States, odds are that it is being imported from a State that relies on coal, but no one talks about that.

We will learn from some of the testimony about the Regional Greenhouse Gas Initiative, RGGI. One of the witnesses we will hear from today, Mr. Martens, thank you for coming, is affiliated with RGGI, a program of nine northeastern States that uses market principles to reduce greenhouse gas emissions from the power sector.

Mr. Martens may not mention that RGGI's nine States consume five times more energy than they produce. My little State of West Virginia produces twice as much energy as all nine of the

RGGI States combined.

There are energy-producing States and there are energy-consuming States. Only 13 States produce more energy than they consume. West Virginia ranks second and Wyoming ranks first. For 10 of the 13 states that export energy, coal is critical to maintaining that net positive result.

Put simply, there is no way that this massive, largely EPA-driven reduction in coal-fired electricity generation is going to impact only coal States. It is going to impact the majority of States, the families and businesses within them. Often, the poorest and most vulnerable populations will bear the brunt of this increase.

I look forward to hearing in greater detail from our witnesses about the impact of these proposed regulations and the need for clean air policies that do not overburden our States and cripple our economy.

With that, we will begin testimony of our panelists. Our first panelist is Mr. Eugene M. Trisko. Welcome and thank you for coming.

[The prepared statement of Senator Capito follows:]

STATEMENT OF EUGENE M. TRISKO, ATTORNEY AT LAW, ON BEHALF OF THE
UNITED MINE WORKERS OF AMERICA

Mr. Trisko. Thank you very much, Chairman Capito, Chairman Inhofe and distinguished members.

I am Eugene Trisko, an energy economist and attorney in private practice. I am here today to summarize the findings of a study of the impacts of energy costs on American families.

I have conducted household energy cost studies periodically since 2000 for the American Coalition for Clean Coal Electricity and its predecessor organizations. The study I will summarize today, *Energy Cost Impacts on American Families*, estimates consumer energy costs for households in 2016.

The principal findings of this study are as follows. One, some 48 percent of American families have pre-tax annual incomes of \$50,000 or less, with an average after-tax income among these households of \$22,732 or a take-home income of less than \$1,900 per month.

Second, 48 percent of households earning less than \$50,000 devote an estimated average of 17 percent of their after tax incomes to residential and transportation energy. Energy costs for the 29 percent of households earning less than \$30,000 before taxes represent 23 percent of their after-tax family incomes, before accounting for any energy assistance programs. This 23 percent of income is more than three times higher than

the 7 percent of gross income paid for energy by households earning more than \$50,000 per year.

Third, American consumers have benefitted recently from lower gasoline prices, but higher oil prices are now reducing consumer savings at the gas pump. Meanwhile, residential electricity prices are continuing to rise. Residential electricity represents 69 percent of total household utility bills.

A 2011 survey of low-income households for the National Energy Assistance Directors Association reveals some of the adverse health and welfare impacts of high energy costs. Low-income households reported these responses to high energy bills.

Twenty-four percent went without food for at least one day. Thirty-seven percent went without medical or dental care. Thirty-four percent did not fill a prescription or took less than the full dose. Nineteen percent had someone become sick because their home was too cold. The relatively low median incomes of minority and senior households detailed in the study attached to my statement indicate that these groups are among those most vulnerable to energy price increases.

Recent and prospective increases in residential energy costs should be assessed in the context of the long-term declining trend of real income among American families. The U.S. Census Bureau reports that the real pre-tax incomes of

American households have declined across all five income quintiles since 2001, measured in constant 2013 prices. The largest percentage losses of income are in the two lowest income quintiles. In 2014, the average price of residential electricity in the U.S. was 32 percent above its level in 2005, compared with the 22 percent increase in the Consumer Price Index.

DOE projects continued escalation of residential electricity prices due to the cost of compliance with environmental regulations and other factors. Moreover, DOE, EPA, NERA and others project that electricity prices will increase even more because of EPA's proposed Clean Power Plan.

Lower income families are more vulnerable to energy cost increases than higher income families because energy represents a larger portion of their household budgets. Energy costs reduce the amount of income that can be spent on food, housing, health care and other basic necessities.

Fixed income seniors are among the most vulnerable to energy cost increases due to their relatively low average incomes and high per capital energy use. Senior citizens and other low income groups will bear the burden of higher energy costs imposed by EPA's Clean Power Plan but will be among the least likely to invest in or to benefit from the energy efficiency programs the proposed rule envisions.

Thank you for the opportunity.

[The prepared statement of Mr. Trisko follows:]

Senator Capito. Thank you very much.

Our next witness is Paul Cicio, President of the Industrial Energy Consumers of America. Welcome.

STATEMENT OF PAUL CICIO, PRESIDENT, INDUSTRIAL ENERGY CONSUMERS
OF AMERICA

Mr. Cicio. Thank you, Chairman Capito, Ranking Member Carper and members of the subcommittee. Thank you for this opportunity.

The Industrial Energy Consumers of America is a trade association whose members are exclusively large companies who are energy intensive trade exposed. These industries, often referred to as EITE industries, consume 73 percent of the manufacturing sector's use of electricity and 75 percent of the natural gas. As a result, small changes in energy prices can have relatively large impacts to our global competitiveness.

As a manufacturing sector, we use 40 quads of energy and this has basically not changed in 40 years. Meanwhile, manufacturing output has increased 761 percent. This is a true success story.

The industrial sector is the only sector of the economy whose greenhouse gas emissions are 22 percent below 1973 levels. These industries are very energy efficient. IECA supports action to reduce greenhouse gas emissions so long as it does not impact our competitiveness. We must have a level playing field with our global competitors.

Several countries we compete with control electric and natural gas prices to their industrials. Two of them are China

and Germany. They provide subsidies and practices to give them competitive advantages.

If we were military, one would say we are engaged in hand to hand combat in competitiveness. All costs of unilateral action by the United States through the Clean Power Plan will be passed on to us, the consumer.

As proposed, the Clean Power Plan will dramatically increase the costs of power and natural gas, accomplish little to reduce the threat of global climate change and provide offshore competitors an economic advantage, potentially creating an industrial greenhouse gas emission leakage with harmful effect to the middle class, the economy and the environment.

The EPA cannot look at the Clean Power Plan in isolation from the significant cumulative cost that it will impose on the industrial sector either directly or indirectly through a number of recent rulemakings.

Since 2000, the manufacturing sector is still down 4.9 million jobs. Since 2010, manufacturing employment has increased 525,000 jobs. We are still in the early stages of recovery. We do fear that the Clean Power Plan and also the ozone rule are going to threaten this recovery.

In contrast, for example, China, our primary competitor, has increased employment by 31 percent since 2000. The U.S. manufacturing trade deficit since 2002 has grown \$524 billion,

70 percent with one country, China.

China's industrial greenhouse gas emissions have risen over 17 percent since 2008 alone. China produces 29 percent more manufactured goods than we in the United States and emits 317 percent more CO₂. That is over three times the amount of CO₂ than the U.S. industrial sector.

Despite our low greenhouse gas emission levels, the EPA will increase our costs and will make it easier for China's carbon intensive products to be imported, which means the Clean Power Plan will be directly responsible for increasing global emissions.

There are consequences to increasing energy costs on the industrial sector and it is called greenhouse gas leakage. The EPA has failed to address this issue and thus, the costs are under-estimated. For example, when a State's electricity costs rise due to the Clean Power Plan, companies with multiple manufacturing locations will shift their production to States with lower costs, along with the greenhouse gas emissions creating State winners and losers. When they do, it will increase the price of electricity to the remaining State ratepayers, including the households.

If these companies cannot be competitive, they move offshore, moving jobs and greenhouse gas emissions, accomplishing nothing environmentally. One only needs to look

at California.

Since AB32, to our knowledge, there is not a single energy-intensive trade-exposed company that has built a new facility in California. The same goes for the EU under the ETUS.

California is importing their energy intensive products and they are losing or forfeiting jobs.

It is for this reason we would urge policymakers to hold offshore manufacturing competitors to at least the same carbon content standard as we in the United States.

Thank you.

[The prepared statement of Mr. Cicio follows:]

Senator Capito. Thank you very much.

Our next witness is Mr. Harry Alford, President and CEO of the National Black Chamber of Commerce. Welcome.

STATEMENT OF HARRY ALFORD, PRESIDENT AND CEO, NATIONAL BLACK
CHAMBER OF COMMERCE

Mr. Alford. Good afternoon, Chairman Capito, Ranking Member Carper and distinguished members of the subcommittee.

My name is Harry Alford. I am President and CEO of the National Black Chamber of Commerce.

The NBCC represents 2.1 million Black-owned businesses within the United States. I am here today to testify about the Environmental Protection Agency's proposal to regulate greenhouse gas emissions from power plants and the potential impacts of those proposed regulations on energy costs for American businesses, rural communities and families.

In particular, I would like to focus on the potential adverse economic and employment impacts of the Clean Power Plan on low income groups and minorities, including individuals, families and minority businesses.

While increased costs often come with increased regulation, the Clean Power Plan in particular seems poised to escalate energy costs for Blacks and Hispanics in the United States. According to a recent study commissioned by the National Black Chamber of Commerce, the Clean Power Plan would increase Black poverty by 23 percent, Hispanic poverty by 26 percent, result in cumulative job losses of 7 million for blacks, nearly 12 million for Hispanics in 2035, and decrease black and Hispanic median

household income by \$455 to \$550, respectively, in 2035.

For these minority and low income groups, increased energy costs have an even greater impact on their lives, jobs and businesses because a larger percentage of their incomes and revenues are spent on energy costs.

What may seem like a nominal increase in energy costs to some can have a much more harmful effect on minorities and low income groups. Our members are very concerned about these potentially devastating economic impacts of the Clean Power Plan. We appreciate the opportunity to highlight them for the committee. In light of these concerns, the National Black Chamber of Commerce undertook an effort to examine the potential economic and employment impacts of the Clean Power Plan on minorities and low income groups.

On June 11, 2015, the NBCC released a study on the threat of the EPA regulations to low income groups and minorities. The study finds that the Clean Power Plan will inflict severe, disproportionate economic burdens on poor families, especially minorities. In particular, the rule imposes the most harm on residents of seven States with the highest concentrations of Blacks and Hispanics.

The EPA's proposed regulation for greenhouse gas emissions from existing power plants is a slap in the face to poor and minority families. These communities already suffer from high

unemployment and poverty rates compared to the rest of the Country. Yet, the EPA's regressive energy tax threatens to push minorities and low income Americans even further into poverty. I want to highlight some of the key findings of the study.

The EPA rule increases Black poverty by 23 percent and Hispanic poverty by 26 percent. In 2035, job losses will total 7 million for Blacks and 12 million for Hispanics. In 2035, Black and Hispanic median household income will be \$455 and \$515 less respectively.

Compared to Whites, Blacks and Hispanics spend about 20 and 90 percent more of their income on food, 10 percent and 5 percent more on housing, 40 percent on clothing and 50 percent and 10 percent more on utilities, respectively. The rule will especially harm residents of seven States with the highest concentration of Blacks and Hispanics. Those States are Arizona, California, Florida, Georgia, Illinois, New York and Texas.

The study demonstrates that the EPA Clean Power Plan would harm minorities' health by forcing tradeoffs between housing, food and energy. Inability to pay energy bills is second only to the inability to pay rent as the leading cause of homelessness.

Business groups like the NBCC are not the only entities expressing concerns about the Clean Power Plan. States, which

would be responsible for implementing the Clean Power Plan, have criticized the plan for numerous deficiencies.

Officials from 28 States say the EPA should withdraw its proposal citing concerns such as higher energy costs, threats to reliability and lost jobs. Officials from 29 States have said EPA's proposed rule goes well beyond the agency's legal authority under the Clean Air Act and 50 States have already joined in lawsuits.

The NBCC totally supports the ARENA Act, S. 1324. We certainly encourage all members of this committee to put the bill to vote and make it law.

Thank you so much.

[The prepared statement of Mr. Alford follows:]

Senator Capito. Thank you very much.

Our next witness is Joseph J. Martens, Commissioner, New York State Department of Environmental Conservation. Welcome, Mr. Commissioner.

STATEMENT OF JOSEPH J. MARTENS, COMMISSIONER, NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mr. Martens. Thank you, Chairman Capito, Ranking Member Carper and members of the subcommittee. Thank you for providing the opportunity for me to testify this afternoon.

My name is Joseph Martens and I am the Commissioner of the New York State Department of Environmental Conservation. I am also Vice-Chair of the Board of Directors of RGGI Inc., which administers the Regional Greenhouse Gas Initiative, a program of nine northeastern States that uses market principles to reduce greenhouse gas emissions from the power sector.

I thank the committee for providing me the opportunity to discuss the success we have had in reducing carbon emissions in New York, while creating jobs and keeping energy bills in check.

I have spoken with many of my colleagues from other States across the Country and have heard many of them discuss their concerns about the rule. I recognize that each State faces different circumstances but I think in RGGI, we have a successful model for reducing emissions while creating jobs and reducing energy bills. Other States can use similar approaches to comply with the Clean Power Plan tailored to their own circumstances.

RGGI was started in 2005 by a bipartisan group of Northeastern and Mid-Atlantic governors. It sets a declining

cap on emissions and allows the market to determine efficiently where the emission reductions will occur.

In addition to their participation in RGGI, each of the RGGI States has aggressive energy efficiency and renewable energy programs. The RGGI cap collects the reductions from these efforts under a single emission cap and shares the carbon reductions from these programs are realized and accounted for.

Proceeds from RGGI allowance options helps fund many of these initiatives, creating a virtual cycle of consumer benefits for taxpayers and ratepayers. Our program has been a resounding success.

The State greatly exceeded the original 10 percent reduction target, achieving a 40 percent reduction by 2012. To achieve even greater reduction, the RGGI States acted to further reduce the cap to 50 percent below 2005 levels in 2020.

We achieved this reduction in an economy that grew 8 percent over the period from 2005 to 2013, adjusted for inflation. In New York, we have realized economic benefits from RGGI and associated programs, including creating jobs and reducing energy bills. For example, Governor Cuomo's New York Sun program has made New York fourth in the Nation for solar jobs.

As of the end of 2014, we have committed more than \$550 million in proceeds from the auction of RGGI emission allowances

to programs that will provide energy bills savings of over \$1 billion or other benefits to over 130,000 households and 2,500 businesses.

Beneficiaries of programs funded by RGGI proceeds include low income families and businesses. For example, two energy efficiency programs targeted specifically at income eligible families are providing 100,000 low and moderate income families with more than \$80 million in cumulative energy bill savings.

To those who say reducing emissions will cause electric rates for businesses to rise, we have actually reduced industrial electricity rates while reducing carbon emissions from 50 percent over the national average to 13 percent below.

We have enjoyed similar outcomes across the RGGI region. An independent analysis undertaken by the highly respected Analysis Group concludes that the reinvestment of auction proceeds from the first three years of the program is reducing total energy bills in the RGGI regions by \$1.3 billion, adding \$1.6 billion to regional economy and creating an estimated 16,000 jobs.

Reducing emissions also provides substantial public health benefits, including saving lives, reducing illness, health care costs and lost work days. Our experience demonstrates that a group of States can substantially reduce emissions and grow the economy at the same time. Therefore, instead of asking whether

we can afford to reduce that pollution, a more pertinent question is whether we can afford not to act now to reduce the emissions that are causing our climate to change.

In New York, we are already experiencing the destructive effects of climate driven extreme weather. Three years ago, Hurricane Sandy decimated many communities and tens of thousands of homes in New York and New Jersey at a cost of \$67 billion. Over 70 lives were lost in the area struck by the storm. A year earlier, Hurricanes Irene and Lee caused 66 deaths and \$17 billion in damage. These storms disproportionately harmed low income families and small businesses in communities located in low lying areas most vulnerable to flooding.

Our choice as a Nation is straightforward. We can invest in clean energy, creating jobs as a result at little or no net cost and reap the benefits of better health, lower health costs and reduced risk of climate change or we can ignore the science and expect more frequent storm events causing tens of billions of dollars in damages.

To New York, the answer is clear. We have demonstrated it is possible to use energy more efficiently, stimulate economic growth, provide healthier air and reduce the potential damage from climate change.

That concludes my testimony. Thank you.

[The prepared statement of Mr. Martens follows:]

Senator Capito. Thank you.

Our final witness is Mary B. Rice, M.D., MPH, Instructor in
Medicine, Harvard Medical School, Division of Pulmonary,
Critical Care and Sleep Medicine. Welcome.

STATEMENT OF MARY B. RICE, M.D., MPH, INSTRUCTOR IN MEDICINE,
HARVARD MEDICAL SCHOOL, DIVISION OF PULMONARY, CRITICAL CARE AND
SLEEP MEDICINE

Dr. Rice. My name is Dr. Mary Rice. I am an adult pulmonologist and critical care physician at Beth Israel Deaconess Medical Center and Harvard Medical School in Boston.

I care for adults with lung disease, most of whom have asthma or emphysema. I also care for critically ill adults in the intensive care unit.

My message is simple. Climate change is becoming the worst public health crisis of modern medicine. Hundreds of research studies have demonstrated that greenhouse gas emissions have already changed our climate over the past several decades, causing heat waves that last longer and happen more frequently, dangerous spikes in ground level ozone, increased wildfire activity and longer, more potent pollen seasons. These effects hurt American families.

My physician colleagues and I are already seeing these health effects among our patients. The American Thoracic Society recently conducted a survey of our U.S. members who are doctors from all around the Country, caring for children and adults.

We found that the vast majority of doctors said climate change is affecting their patients today. Let me describe just

a few of the health effects that my colleagues and I see.

Consider heat waves. Several doctors commented that their patients with emphysema, already struggling to breathe, cannot handle extreme heat. Studies have found that people with asthma and emphysema visit their doctors more often and get hospitalized more often during heat waves. The elderly, who may already be weakened by heart and lung disease, die during heat waves.

Extreme heat also increases ozone to levels that are harmful to the lungs of people, not only people with asthma and emphysema but also the lungs of babies and young children, and even healthy adults. Ozone spikes during heat waves have been found to contribute to premature mortality.

The hot conditions promoted by climate change favor forest fires and grassland fires, which are at a great cost to human health. During a heat wave in May 2014, for example, multiple wildfires broke out simultaneously in San Diego County, causing \$60 million in damage.

This estimate does not capture the damage to the health of families who were affected by those fires. Wildfires can travel great distances and release a mixture of toxins that are especially irritating to the lung making it harder for people to breathe.

A colleague of mine in San Diego told me that he advised

all his patients to stay inside and keep the air conditioning on. Is this the future we want for American families, one where it is not safe to go outside? There is no doubt that wildfires increase hospitalization for asthma in children and adults and for respiratory illness among the elderly.

Climate change is also bad for people with seasonal allergies, about 30 percent of all Americans and for the roughly 10 percent of Americans with asthma. Warmer temperatures lengthen the pollen season because plants bloom earlier in the spring and also higher levels of carbon dioxide increase the amount of pollen that is produced.

In the northern States of the U.S., pollen seasons have lengthened by more than two weeks to date than they were in 1995. They are also more powerful. Studies have found that when pollen levels are higher, people use more medications, visit their doctors more for allergies and emergency room visits for asthma among children and adults go up.

One of my patients, a single mother with a teenage son, both of whom have severe asthma, called me on a weekly basis this spring because of trouble breathing. Between the missed days of school for her son and missed days of work for her, this allergy season was a disaster for her family.

I am a physician and a researcher, but my most important job is my role as a mother to three children under the age of

six. My one year old son has had two emergency room visits and a hospitalization for respiratory illness.

When my son develops a cough or wheeze, I am terrified because this could mean the next ambulance ride. When he is sick, I cannot go to the hospital and take care of my patients or my husband cannot work.

We are more fortunate than many Americans, many of whom risk losing their job or struggle to pay for the next emergency room visit when they or a loved one suffers an acute respiratory illness. My son and every American deserves clean air.

I have only described a few of the threats to the health of Americans from climate change. Experts predict that we can avoid the most frightening scenarios if we reduce greenhouse gas emissions and better yet, when we address climate change, we redeem immediate health benefits right here in the U.S. When we reduce greenhouse gas emissions, we also reduce air pollutants that trigger heart attacks, asthma and emphysema attacks, stroke and death.

As a mom, a doctor and a representative of the American Thoracic Society, I favor taking firm steps to address climate change because I support clean air and a healthy future for all Americans.

Thank you.

[The prepared statement of Dr. Rice follows:]

Senator Capito. Thank you, Doctor.

I want to thank you all. We will begin the questions and I will begin.

Mr. Trisko, you mentioned in your remarks the impacts of the conservation building block of the Clean Power Plan and how elderly citizens and those on fixed incomes would probably be least likely to be the ones to benefit from that or be able to afford to make those changes.

It says the Energy Information Administration projects that consume energy prices will go up by 4 percent by 2020 which seems rather low since we just had a 16 percent rise in our prices in West Virginia.

How do you see these two converging, the rising price and the lack of the conservation and deficiency aspects of this Clean Power Plan for the elderly citizen and those on fixed incomes?

Mr. Trisko. Let me first address the observation I offered with respect to senior citizens being least likely to benefit from the energy efficiency aspects of the Clean Power Plan.

That observation derives from two facts. First is the payback period that is required to support major investments in energy efficiencies such as replacement of windows and heating and ventilating systems.

Those payback periods typically are too long to be

economically feasible for lower income senior citizens. It is also true in general for the population that American houses tend to be owned for a period of about seven years on average.

If you are a homeowner looking at a \$10,000 window replacement project that is going to save a few hundred dollars a year on your energy bills, that payback period is not consistent with the period that typical homeowners expect to live in those dwellings.

Secondly, I have heard this from senior utility executives as well. One of the difficulties in securing energy efficiency gains from lower income consumers is the quality of the housing stock, the relatively poor quality of the housing stock, will not support investments in fairly high cost energy efficiency upgrades such as windows and HVAC systems.

Certainly lower cost options, the simple things such as better attic insulation, weather stripping and the like have short payback periods and are feasible. The magnitude of the energy efficiency investments EPA is projecting in the Clean Power Plan, which NERA estimates to cost some \$500 billion for American consumers, those investments simply will not be made by the elderly and the lower income consumers.

I hope that is responsive to your question.

Senator Capito. Thank you.

Mr. Alford, the Energy Information Administration recently

concluded the Clean Power Plan could reduce the GDP by \$1 trillion. Based on the analysis that you just did and explained, could you reemphasize for us how you think that is going to impact low income or even minority citizens across the Country?

Mr. Alford. It is going to be very critical and tragic. As far as the 2.1 million Black-owned businesses we represent, their customer base is going to wither and I think the quality of life is going to hurt in our communities. I think people will start to short-shrift monies that would be used for health care or education. I think people who would resort to crime and violence because they are poor and broke would increase.

I think it would hurt our communities severely.

Senator Capito. A final question very quickly, Mr. Trisko. Part of the ARENA Act says we should not move forward with these regulations until all the legal aspects are settled. As you know, States are challenging this and will challenge when the final rule comes out.

If States begin to make changes in the meantime, what kind of scenario does that present to you in terms of how States are going to be able to react not knowing whether the legal issues have been settled as yet?

Mr. Trisko. Senator, you have hit upon one of the most desirable aspects of the ARENA Act. Let me put it in the

context of the current situation that the electric utility industry faces.

With respect to EPA's 2011 Mercury and Air Toxic Standard Rule or the MATS rule, the MATS rule is currently before the Supreme Court. A decision is expected shortly within a matter of days.

It is possible the Supreme Court decision could result in vacating the rule. And yet, utilities, in order to comply with that rule already have retired dozens of power plants across the United States and are scheduled to retire even more over the course of the next year.

Wouldn't it be advisable as a matter of public policy before implementation of the most expensive rule ever imposed on the electric utility sector, \$9.5 billion a year, to know up front whether the rule is legal?

Senator Capito. Thank you.

To our Ranking Member, Senator Carper, a fellow West Virginian, I want to say welcome and also ask if he could do his opening statement and then do questions which I say most certainly you can.

Senator Carper.

STATEMENT OF THE HONORABLE TOM CARPER, A UNITED STATES SENATOR
FROM THE STATE OF DELAWARE

Senator Carper. Thank you, Madam Chairman. Thanks for holding the hearing.

To all of our witnesses, it is great to see you and thank you for joining us, some of you not for the first time.

Dr. Rice, I will think about your son and hope he grows up to be 101 or 102 years old and has a great life.

One of the issues we always wrestle with here is, is it possible to have cleaner air, cleaner water and at the same time, have a strong economy. For most of my life after the Navy, I focused on job creation and job preservation and what we do to foster a nurturing environment for job creation and job preservation.

If you go back to January 2009, the week Barack Obama and Joe Biden were sworn into office, that week 628,000 people filed for unemployment insurance. Think about that, one week in January 2009. In the last six months of 2008, we lost 2.5 million jobs. The first six weeks in 2009, we lost another 2.5 million jobs. That is 5 million jobs literally in a 12-month period of time.

Since 2010, we have adopted new mercury regulations on power plants. We have adopted new carbon pollution or fuel economy standards on cars and trucks. We have also adopted

across State air pollution standards. Since 2010, we have added 762,000 manufacturing jobs and millions other jobs, but three-quarters are manufacturing jobs.

This leads me to believe that maybe it is possible to have cleaner air and cleaner water and at the same time actually do better by virtue of our economy and economic growth. I would ask that we keep that in mind.

As the Chairman said, I was born in Beckley, West Virginia, a coal mining town. I grew up there in Roanoke and Danville, Virginia. Now I represent the State of Delaware, the lowest lying State in the Country. We see every day the effects of climate change and global warming. Sea level rise creeps up higher and higher on the east coast of my State. It is some very, very real to us.

For decades, the fear of the cost to combat climate change prevented any real action on this issue in Congress. Since coming here, I have tried to work with my colleagues on a climate compromise that would harness market forces to reduce carbon pollution and reduce the cost of compliance.

As part of that compromise, I worked with Senator Byrd and a handful of other coal State Senators on language that would have provided more than \$10 billion in incentives to support the deployment of clean coal power plants.

This language, along with other language, intended to

buffer impacts to the coal industry, was included in the Kerry-Boxer bill which regrettably was not enacted into law. Instead, in coming to a compromise on climate change, Congress came to a stalemate. All the while, it is becoming clear that the price of inaction is much greater than the price of action.

The EPA just released a comprehensive report that outlines the alarming truth that failure to act on climate change will result in dramatic costs for our environment and for our economy. Findings are pretty clear concerning low lying States like Florida, Delaware and others up and down the east coast.

Without action on climate change, we are going to need to spend billions of dollars in this century to protect States from rising sea levels and extreme storms.

The study also projects that inaction on climate change could lead to extreme temperatures and cause thousands of deaths throughout the northeast and the mid-Atlantic regions of our Country.

At least it is clear to me that as each year passes without action, the more severe, the more costly and perhaps more irreversible the effects of climate change are becoming. For those of us who come from States already being impacted by climate change, I think the message is clear and that is, we can no longer afford inaction.

Many States such as New York, represented here today and

welcome, and Delaware have already taken action to reduce the emissions of the largest emitters of carbon pollution, power plant.

As we will hear today, the economics of these States continue to grow at a faster rate than the States that have yet to put climate regulations in place. However, we need all States to do their fair share to protect the air we breathe and stem the tide of climate change.

The EPA's Clean Power Plan attempts to do that. Under the Clean Power Plan, States are given their own carbon pollution targets and allowed to find the most cost effective way to find reductions. In fact, it sounds similar to the compromise I tried to foist on my colleagues here a number of years ago.

I believe instead of undercutting the Clean Power Plan, we should be working in good faith with the agency to find ways to improve the regulation. For example, the regulation could be improved in several ways.

One, to ensure early action, States are not penalized for being climate inefficiency leaders. Two, ensure that all clean energy, including nuclear, is treated equitably. Three, ensure we meet our carbon reduction goals.

No compromise is ever perfect. The worse thing we can do is to do nothing while we try to find the perfect solution. We must act now while the ability to mitigate the most harmful

impact is still within our grasp.

The choice between curbing climate change and growing our economy is, as I have suggested here many times, a false one. Instead, we must act on curbing climate change in order to protect the future economy prosperity of our Country.

[The prepared statement of Senator Carper follows:]

Senator Carper. Madam Chairman, thank you for letting me give my statement and ask some questions.

I was delayed today because we had a caucus lunch. Part of our caucus lunch discussion, you would be interested to know, was about the transportation bill, the six year transportation bill authored by Chairman Inhofe, Senator Boxer, Senator Vitter and myself which I think is going to be well received. We are excited about that. We had a discussion about that and I got here a little late and I apologize for that.

I like to joke around a bit and I thought I was going to come in and say I had taken a call from the Pope but I am not Catholic and he rarely calls me. I must say I am impressed with this guy.

I am impressed with him because I think he actually read the New Testament and has a real commitment to the least of these in our society. You know, when I was hungry, did you feed me? When I was thirsty, did you give me drink? When I was naked, did you clothe me? When I was sick in prison, did you come to visit me? He gets that and really calls on all of us to do the same.

The other thing that he gets, for those of you familiar with Scripture, most of you probably more than me, is we have a moral obligation to make sure we have a planet with a decent quality of life. He believes and a lot of folks believe that

there is a real serious problem here. We have a moral imperative to do something about it.

We can talk about all these other studies and everything until the cows come home, but I would have us keep that thought in mind. Now I have a couple of questions.

First, I ask unanimous consent to submit for the record two items. One is the latest report from the Lancet and the University College London Commission on Health and Climate Change entitled Health and Climate Change Policy, Responses to Protect Public Health.

I would also ask unanimous consent to submit the EPA's peer-reviewed report entitled Climate Change, the United States Benefit of Global Action.

Senator Capito. Without objection.

[The referenced information follows:]

Senator Carper. Thank you, Madam Chair.

Dr. Rice, mother of three, you mentioned in your testimony the many different ways that climate change is already impacting the health of Americans. Who would you say are the most vulnerable to the health effects of climate change and who would have the most to gain from reductions in carbon pollution?

Dr. Rice. Thank you for this question, Senator Carper.

A number of groups are especially vulnerable to the health consequences of climate change. The ones I would identify would be the elderly because many of them already have chronic health conditions like heart and lung disease that makes them especially vulnerable to the health effects of high heat and high air pollution levels.

Another very important group is low income people. People who have less income have less access to air conditioning during heat waves. There have been a number of studies looking at cities which suffer the most in some ways from extreme heat because of an island effect of the buildings in the cities. The poor neighborhoods of cities have been found to have the worse urban heat problem.

People who have low income also are the same people who are often exposed more to higher levels of air pollution to begin with and have less access to health care and resources to help them manage climate change.

There is a third group. I know I am short on time, but that is children. Asthma is especially prevalent in children. They are at high risk from all of the issues I identified, high heat, high ozone levels, air pollution from wildfire, and higher pollen levels. It is going to be a major consequence for American children.

Senator Carper. One quick yes or no answer, if you will. In a study released last week by the Lancet, one of the world's oldest and best known German medical journals concluded that the impacts of climate change threaten to undermine the last half century of gains in development and global health. Would you agree with this conclusion, yes or no?

Dr. Rice. I certainly agree it is a major public health problem facing the planet.

Senator Carper. Thank you.

My time has expired. Thank you.

Senator Capito. Thank you.

Senator Fischer.

Senator Fischer. Thank you, Madam Chairman and Ranking Member Carper.

Mr. Cicio, Nebraska is a public power State. One hundred percent of our power is owned by the people of Nebraska. We are going to be hit especially hard by these regulations proposed in the Clean Power Plan. We are going to see rate increases that I

believe will be substantial.

What do you believe will be the impact of the increase we are going to have in the electricity rates on business operations like manufacturing? What will be the impact there?

Mr. Cicio. All of these companies compete globally. There is almost no exception anymore. As I specifically alluded, the competition is very fierce. Companies win or lose business based on a cents a pound or pennies on a ton of product they make, so all of these costs are additive.

When we get to the Clean Power Plan, it is not just the cost of the Clean Power Plan. Embedded in those electricity rates that give your State a problem, there is already the cost of PM 2.5 and there is already the mercury rule cost.

For us in industrials, there is already the industrial boiler MATS cost. Now there is the Clean Power Plan cost. On top of that is coming the ozone cost. It is a cumulative cost of doing business that our competitors do not have overseas.

There is no way around higher costs and loss of competitiveness. Eventually it impacts jobs. Most of our jobs are middle class jobs.

Senator Fischer. What is the impact then on American families? When we see these costs on businesses continue to increase, that has a direct cost on American families, correct? How would you say the ARENA Act will address some of these

issues? What specifically is in the proposed legislation?

Mr. Cicio. I would like to say from a commonsense standpoint, everyone in the Country that has followed this knows this is going to be litigated, 100 percent sure. There is no doubt about it.

The EPA knows there are costs. The EPA does not want to hurt people by higher energy costs but this rule will. It is commonsense to say let us wait until we have this settled by the courts before States act to particularly shut down, as the EIA report of last month said, they are not going to shut down 40,000 gigawatts, it is now 90,000 gigawatts of coal fired power plants prior to 2020. That will have a dramatic impact on increasing electricity costs.

Senator Fischer. Thank you.

Mr. Alford, I think most of us in this room take our ability to have electricity for granted. As you mentioned, there is a large number of Americans who are balancing whether they can afford an electric bill or pay rent or put food on the table for their families. As you mentioned, that is going to lead, I think, to those hard choices that people make and send some of them to the streets where they become homeless.

Can you talk more about those tough choices that low income families have to make when they look at their electricity bills, why you think the costs are going to be driven up through this

action by EPA, and why it will be so harmful?

Mr. Alford. Dr. Rice is a mother of three. I am a father of six. I guess I am up to 11 grandchildren. My wife and I have been the godmothers and godfather of the very extended family.

There are a lot out there who need help and we do all we can to connect them with some of our members who can create jobs for them, but it is an ongoing task. It is rough out there.

I have children in Mobile, Atlanta and Los Angeles and it gets worse and worse and worse. Lord knows what happens to someone who does something wrong and gets into the judicial system, they will never have a job unless I create a job for them. It is very rough out there.

I think we need a government that is sensitive to what is going on in these communities and will come up with some policy that builds a greater America and a more secure America and not put people on thin ice.

Senator Fischer. Well said, well said. We all want clean air, we all want clean water, but we need to be aware of what these regulations will do to American families.

Thank you, sir.

Mr. Alford. I have been having discussions with the Omaha Black Chamber of Commerce too.

Senator Fischer. Great. Thank you.

Senator Capito. Senator Merkley.

Senator Merkley. Thank you very much, Madam Chair.

I wanted to follow up with Dr. Rice. The statistics that I have seen say that 78 percent of African-Americans live within 30 miles of a coal-fired power plant and that an African-American child is three times more likely to go to an emergency room for an asthma attack than a White child and twice as likely to die from an asthma attack.

Is there a correlation or connection between the coal-fired power plants and the higher death rate for African-American children?

Dr. Rice. The health effects of air pollution from coal-fired power plants and other sources of particle air pollution are very well documented. It is now well established in the scientific community that air pollution causes increases in hospitalization for asthma, asthma attacks, and more medication to treat the asthma symptoms.

There are also inequities in where people live and where the sources of air pollution are located. That is an issue called environmental justice. Communities of color and low income communities are disproportionately exposed to air pollution from coal-fired power plants and other sources of air pollution. Therefore, if we reduce greenhouse gas emissions, those communities stand the most to benefit locally, right there

where the pollution is emitted.

Senator Merkley. To summarize, you are saying yes, there is a connection between the coal-fired power plant pollution and the illnesses and deaths that are disproportionately occurring?

Dr. Rice. The simple answer is yes. I do agree with you.

Senator Merkley. It sounded like you were withdrawing the explanation of why that was indeed the case.

You ended on the note that disproportionate benefits from changing the quality of the air go to those who are most affected and that would be those closest to sources of pollution. Public health and climate benefits from this law are estimated to be somewhere between \$55 billion to \$93 billion per year 15 years from now. That is compared to the estimates of \$7.3 billion to \$8.8 billion for the rule.

On the order of 8 to 1 or 10 to 1 of health benefits versus cost, that seems a pretty good tradeoff for an investment when you can get an eightfold return. It is a huge quality of life issue. Would you share that opinion?

Dr. Rice. Senator, I agree that the public health benefits of reducing greenhouse gas emissions are tremendous. They have been studied in a number of different ways, including the report you just cited that showed the public health benefits for mortality and other health issues far outweighed the implementation costs.

That is just one study but there have been many other studies. There is one done by Jason West and a group at UNC, Chapel Hill, looking at just the mortality benefits of the better air quality from reducing greenhouse gas emissions, not even looking at all the health effects I talked about from climate change, but just the air pollution benefits that would be gained right away. They estimated that those mortality benefits would exceed abatement costs by 2030.

Senator Merkley. In your testimony, you noted the impact of forest fires. This is particularly occurring out west where we have large coniferous forests that are a major part of our rural lifestyle with our lumber and timber industries.

In the last 40 years, we have seen an increase in the fire season by about 60 days with a huge correlation of more acres of timber burning. In your testimony, you pointed out the health impacts of that smoke and the smoke plumes basically traveling across the Nation.

Dr. Rice. Senator, I can give an example. Wildfire smoke can travel very far distances. There are health effects for communities right there where the fires take place, but there is also respiratory and heart health effects in very distant places.

The wildfires that affected Russia some years ago, those plumes traveled the distance from Chicago to San Francisco, that

equivalent difference. That means that thousands and thousands of people in the regions of wildfires are experiencing health effects due to the reduced air quality.

Senator Merkley. Since the prevailing winds go from west to east, when our forests are burning out in Oregon, California and Washington State, the rest of the Nation is experiencing those impacts. There is also an impact on our rural economy because when we lose both to fire and pine beetles, and I realize that is not your expertise, but with the warmer winters, the pine beetles are doing very well and the timber not so well.

I am over my time, so thank you very much for your feedback.

Senator Capito. Thank you.

I would like to turn it over to the Chairman of our full committee, Chairman Inhofe.

Senator Inhofe. Thank you, Madam Chairwoman.

I remember when we had the first appointed Director of the EPA, Lisa Jackson in the room. It was during the COP in Copenhagen. I asked her, if we are to pass the legislation that has been proposed here, let us keep in mind it started way back in 1997 when we passed the Byrd-Hagel rule by 95 to zero, that if you come back from Rio de Janeiro or one of these places with a treaty that either hurts our economy or does not require the same thing from China and other countries, then we would not

ratify it. Consequently, they never put it forward for ratification.

I said if we were to pass either by regulation or by legislation these reductions, is this going to have the effect of lowering CO2 emissions worldwide? Her answer was no, because it only affects us here in the United States. This is not where the problem is. The problem is in India, China, Mexico and other places.

In fact, would you say, Mr. Cicio, that it would actually have the effect of increasing CO2 worldwide emissions if we were to unilaterally reduce our emissions here by an amount that is going to be driving our manufacturers overseas, where do they go, they go to places where they have the least restrictions. Am I missing something there?

Mr. Cicio. No, you are not missing anything. As a matter of fact, I testified before the House Energy and Power Subcommittee, and one of the key points I made is if we want to be serious about reducing global greenhouse gas emissions, the single most important thing we need to do is increase the manufacturing of products in the United States versus China, for example.

Senator Inhofe. Exactly.

Mr. Cicio. When China produces goods, they emit 300 percent more CO2 than we do here. If energy cost goes up here,

then it is going to result in more imports of these energy intensive products. As a reminder, 70 percent of our manufacturing imports is from one country, China.

Senator Inhofe. That is right.

Mr. Alford, it is good to see you again. I asked for the printed copy of your study. The key findings are fascinating. It concentrates on the regressive nature of this type of legislation or rule. Is that right?

Mr. Alford. That is absolutely correct, sir.

Senator Inhofe. I have not seen it done specifically like this before, so this is something we will use. Was this done for you by an outside group?

Mr. Alford. It was done by Dr. Roger Bezdek of Management Information Systems. We do a study about every two or three years with that group. They are very on the money.

Senator Inhofe. I appreciate that.

Mr. Trisko, I think you made a vague reference to a study of decisions to middle or low income people. I asked to get the written copy. Could you elaborate a bit on that? I do not think you had a chance to do that in your opening statement.

Mr. Trisko. The study I attached to the statement is one of a long running series going back to the time of the Kyoto Protocol. We wanted to know what American families spent on energy defined as residential utilities and gasoline. I have

been updating that study more or less on annual basis ever since. We found, as a general matter, the percentage of after tax income that American households spend on energy has more than doubled over the course of the last 10 to 15 years.

You mentioned the regressive aspects of energy costs and energy price increases. The study I have attached to my statement today looks in particular at the percentage of after tax income for energy spent by households with gross incomes of \$30,000 or less. That is about 30 percent of our population. Those households are spending 23 percent of their after tax income on energy.

Senator Inhofe. Of their expendable income?

Mr. Trisko. Twenty-three percent of their after tax income goes to residential utilities and gasoline. That compares with an average of 7 percent for households earning more than \$50,000 a year, so it is three times greater for the low income category of \$30,000 or less.

The impact of energy price increases is three times greater on those households than it is for households making \$50,000 or more per year.

Senator Inhofe. That is good and is almost exactly what you are saying, Mr. Alford, that it is regressive in that respect.

Mr. Alford. Yes, it is. You brought up asthma. If you

look at the Mayo Clinic, there is no prevention for asthma and there is no correlation of asthma and air. Asthma has been increasing even though through the Clean Air Act, we have been good stewards and decreasing and decreasing ozone and all the emissions, asthma continues to rise. No one knows why.

There is this big false projection that global warming causes asthma. We do not know what is causing asthma. Most of the people who have it get out of it by the time they are adults because their lungs and bodies are strong enough to fight it off.

I am getting very sick of people saying asthma and dirty or global warming. It is a myth.

Senator Inhofe. Thank you, Mr. Alford.

My time has expired.

Senator Capito. Thank you.

Senator Markey.

Senator Markey. Thank you very much.

Dr. Rice, you are here from Harvard Medical School. People are getting sick, are they not? They are not getting sick the way Harry Alford is getting sick. They are really getting sick, aren't they?

Maybe you can bring to us a little bit of your information about the increased hospitalizations, the respiratory related diseases and all of the things that are actually implicated in

having this additional pollution in our atmosphere. Can you talk a bit about how it is impacting especially children in our country?

Dr. Rice. Thank you, Senator Markey.

This is certainly an area where I feel I have a lot to add to the discussion because I am a lung doctor, I take care of patients with lung disease and I also study air pollution when I am not taking care of patients.

In addition to my personal observations as a doctor, I see patients come to see me more often because the pollen level is worse or the ozone levels in Boston sometimes get very high on very hot days.

We also have the observations of the physicians of the American Thoracic Society and the survey I mentioned. Of the doctors completing the survey, the vast majority of them commented they have personally observed that their patients' lung function is worse and their symptoms are worse during high air pollution days.

Senator Markey. There are real implications for the 12 million Americans who already have respiratory illnesses?

Dr. Rice. Certainly. We can look back at the incredible success story of the Clean Air Act. The reductions in air pollution as a result of the Clean Air Act have been astounding. We have really come a long way.

When we look back, researchers look back at the health benefits of the Clean Air Act, they have been astounding, not just for respiratory illness or asthmatic symptom control, but also mortality and heart disease.

Senator Markey. Earlier in your testimony, you mentioned your own son who has a respiratory illness. What can additional pollution that we send up, uncontrolled mean for him and for those others of millions of victims across the Country?

Dr. Rice. There are a variety of sources of air pollution. One is the power plants through the burning of greenhouse gases. There is also traffic and other things.

The reality is that if we do not do anything about greenhouse gas emissions, the EPA report looked at just that piece of the pie and found that ozone levels will increase, predict that we will actually have increases in ozone whereas ozone levels have actually declined and we have experienced health benefits as a result of those gains.

Senator Markey. Thank you for putting that out there. There is real sickness, not metaphorical sickness, that is occurring because of global warming.

Mr. Martens, you are here representing New York and one of the RGGI States, the Regional Greenhouse Gas Initiative States, all of New England, those six States, New York, Maryland and Delaware, nine States that banded together.

Over the last seven years, Massachusetts has actually seen a 40 percent reduction in the greenhouse gases that we are sending up while we are seeing a 22 percent growth in our economy.

Can you talk a bit about that virtuous cycle that seems to elude the observation of those who are critical of our ability to be able to increase the health of individuals and the economy simultaneously?

Mr. Martens. As I said in my testimony, the RGGI experience has been an extraordinarily successful one. We had an independent study done by the Analysis Group that quantified the benefits over a three year period from 2009 to 2011.

There was \$1.3 billion in reductions in bills over the RGGI region; \$1.6 billion in extra or incremental economic activity. It has been an extraordinarily positive experience, all the while, as you said, the region has experienced economic growth. We have reduced bills for low and moderate income families.

Senator Markey. Say that again. You have reduced the electricity bills for low and moderate income people?

Mr. Martens. Yes. The cumulative benefit to just New York low and moderate income bill payers has been \$60 million to date through the first quarter of this year. Those benefits will continue on into the future because New York has specified income eligible ratepayers in two of its programs.

The beauty of the program is that States have the flexibility to target the revenue from the sale of those allowances to a variety of programs. Industrial customers can benefit; low and moderate income ratepayers can benefit; businesses and your average homeowners can benefit. It has been a tremendous success story.

Senator Markey. It is my understanding, Mr. Martens, that under the proposed rulemaking, for example, New Jersey or Pennsylvania could join our Regional Greenhouse Gas Initiative. They can plug into an already existing system that is working, that is lowering costs for low and moderate income, lowering the amount of greenhouse gases while seeing tremendous growth in our GDP. I think there is a reason to be very optimistic.

Listening to the Pope's admonitions to us that we should be the global leader on this, we can use market forces to accomplish the goal while still enjoying tremendous economic growth and taking care of the poor and the moderate income people in our country.

Mr. Martens. I agree with you entirely, Senator. I think there are places around the Country that could benefit from that model. It may not be identical to the RGGI model but certainly States cooperating makes great sense because the efficiencies of dealing with multiple States and energy systems that cross State boundaries has obviously been a great advantage in the RGGI

States. I think it could be elsewhere also.

Senator Markey. I am afraid too many people are just pessimistic in general. They are just not optimistic about our ability as Americans to be the global leader, to use new technologies, to invest in the future, protect young people and our economy at the same time. Unfortunately, they harbor a great doubt about our Country's ability to do that.

I thank the two of you for your testimony because you point out the problems and the solutions. You all have done it in a way which I think should really give people some hope.

Thank you, Madam Chair.

Senator Capito. I think that concludes our hearing. I want to thank the witnesses for bringing forth some great information and facts and lots for us to think about. I appreciate you all taking time today to be with us.

I want to thank my Ranking Member.

With that, we will conclude the hearing. Thank you.

[Whereupon, at 3:19 p.m., the subcommittee was adjourned.]