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U.S. Senate Date: Wednesday, October 21, 2015

Committee on Environment  
and Public Works Washington, D.C.

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HEARING ON OVERSIGHT OF REGULATORY IMPACT ANALYSES FOR U.S.  
ENVIRONMENTAL PROTECTION AGENCY REGULATIONS

Wednesday, October 21, 2015

United States Senate

Committee on Environment and Public Works

Subcommittee on Superfund, Waste Management, and Regulatory  
Oversight

Washington, D.C.

The committee met, pursuant to notice, at 10:02 a.m. in room 406, Dirksen Senate Office Building, the Honorable Mike Rounds [chairman of the subcommittee] presiding.

Present: Senators Rounds, Markey, Vitter, Crapo, Boozman, Sullivan, Inhofe, Carper, Merkley, Booker and Boxer.

STATEMENT OF THE HONORABLE MIKE ROUNDS, A UNITED STATES SENATOR  
FROM THE STATE OF SOUTH DAKOTA

Senator Rounds. Good morning, everyone.

Senator Markey, the ranking member, is on his way. He said it was okay with him if we begin early.

At the same time I think Senator Inhofe will have to leave. As Senator Inhofe may indicate we have multiple committees.

Senator Inhofe. Thank you, Mr. Chairman. We do have a problem, and I am saying this for the benefit of our five witnesses, many of whom have come a long ways and gone to a lot of inconvenience. I appreciate their being here.

In this committee and the Armed Services Committee we have an overlap, I think, of eight members, so we finally have an agreement that they are going to have their committee hearings on Tuesday and Thursday; we would have ours on Wednesday. However, because of the unique situation of the availability of a witness, we are meeting right now at the same time. So that is the reason we don't have that many. They will be trickling in as they participate in the Senate Armed Services Committee.

Thank you, Mr. Chairman.

Senator Rounds. Thank you, sir.

In the meantime, we will get started and try to do it on time to your benefit as well. We appreciate your being here.

The Environment and Public Works Subcommittee on Superfund,

Waste Management and Regulatory Oversight is meeting today to conduct a hearing on Oversight of Regulatory Impact Analyses for the United States Environmental Protection Agency Regulations.

Since President Obama took office in January of 2009, the EPA has issued more than 3,300 new regulations. These regulations impact every U.S. citizen and every U.S. industry, from agriculture to domestic manufacturing and energy production, industries that provide jobs for millions of Americans.

Unfortunately, it is those same Americans who shoulder the burden of these broad, overreaching EPA regulations. According to the Office of Management and Budget, over the last 10 years, EPA regulations have imposed an estimated \$42 billion in annual costs on this Country, costs paid for by American taxpayers and businesses.

In this Congress, the Environment and Public Works Committee has taken a pointed look at the various regulations being promulgated by the EPA, such as WOTUS and the Clean Power Plan. Further, this subcommittee has specifically looked at the science used by the EPA in their rulemaking process and the impact that lawsuits have on the regulatory process.

Today we will be taking a step back to analyze the EPA's rulemaking process as a whole. Our witnesses today will testify to the systematic issues and concerns they are continually

seeing in the EPA's regulatory process.

The EPA routinely fails to fully monetize the costs versus the benefits of their regulations, imposes unfunded mandates onto State and local governments, ignores the impacts of regulations on small businesses, and over-relies on ancillary benefits to justify their regulations.

EPA is required to conduct Regulatory Impact Analysis, commonly known as RIAs, of their regulations to provide both the public and the agencies with accurate information on the costs and benefits of the proposed regulations. However, a July of 2014 report by the independent Government Accountability Office, the GAO, found the EPA failed to conduct a clear, thorough, and accurate analysis of the cost and benefits of, or alternatives to, major regulatory actions. Notably, the GAO concluded that "EPA has not fulfilled its responsibility to provide the public with a clear explanation of the economic information supporting its decision making."

As a result, EPA regulations that cost the United States economy, small businesses, and American taxpayers billions of dollars are being made by Washington bureaucrats who, rather than conducting a thorough, accurate, and public analysis of the impacts these regulations will have, are simply rubber-stamping major regulations that drastically reshape segments of the United States economy. This impacts American businesses ability

to do business on a daily basis, to compete globally, and employ Americans in steady, well-paying jobs.

The EPA is also imposing unfunded mandates on States and local governments at an increasing rate. Often, these regulations are finalized with little input by the affected States and local governments, yet these entities are required to use their limited funds and increasingly tight budgets to comply with these new Federal regulations. Furthermore, the EPA's failure to use accurate information to monetize the cost of these regulations provides the States with little guidance or ability to estimate the compliance costs of regulations.

In October, in its last decision of the term, the Supreme Court ruled in *Michigan v. EPA* that the United States Environmental Protection Agency unreasonably failed to consider costs when deciding to regulate mercury emissions from power plants. Because of these exorbitant regulatory costs, the EPA has attempted to justify their air regulations by identifying ancillary benefits, which the EPA refers to as "co-benefits" to help outweigh the cost of regulations. These co-benefits allow the Administration to claim a dramatic increase in the net benefits of the EPA regulations, regardless of the cost of the regulation.

Everybody desires clean air and clean water, but we have to ask whether there is a better way to achieve it without imposing

burdensome regulations in which the costs outweigh the benefits. Due to the EPA's failure to clearly and accurately quantify the costs and benefits of regulations, agencies are unable to make well-informed decisions. Even more troubling, the public, American businesses, and State and local governments are prevented from understanding the real impact of the regulation and meaningfully participate in the rulemaking process.

I would like to thank our witnesses for being with us today, and I look forward to hearing their testimony.

Now, as I shared earlier, Senator Markey was on his way in. We appreciate his being here and I would like to recognize my friend, Senator Markey, for a five minute opening statement, if you are ready to go, Senator.

Senator Markey. I am ready to go. Thank you.

Senator Rounds. Very good.

[The prepared statement of Senator Rounds follows:]

STATEMENT OF THE HONORABLE EDWARD J. MARKEY, A UNITED STATES  
SENATOR FROM THE STATE OF MASSACHUSETTS

Senator Markey. Thank you, Mr. Chairman, very much. Thank you for having this very important hearing.

The Clean Air Act is one of the most effective public health laws in American history. It has cut air pollution from power plants, from factories, and from vehicles. As of 2010, these regulations saved more than 164,000 adult lives and prevented tens of millions of lost work days due to fewer pollution related illnesses like asthma. And the United States gross domestic product rose 234 percent since President Nixon signed the 1970 Clean Air Act.

The same is true of the 1972 Clean Water Act. It has stopped millions of tons of toxic pollution from degrading our waters and has increased the number of waterways that are safe for fishing, safe for swimming.

We are here today discussing how the EPA develops Regulatory Impact Analysis, a tool used to estimate the costs and the benefits of regulation. This is an inherently challenging task because in many cases putting a dollar value on the benefits and costs of pollution is not straightforward.

For example, scientists figured out that a majority of kids in the 1970s had an unsafe level of lead in their blood, and that this was largely caused by the use of leaded gasoline in



cars. But how do you put a price on the cognitive impairment caused by elevated blood lead levels in a five-year old? Or how about the price of lost schools days due to illnesses like asthma that are aggravated by ground level ozone?

The diminished productivity caused by these childhood exposures may be subtle and span their entire lives. But that doesn't mean that complex and hard-to-quantify environmental and health impacts are not both real and important at the same time.

History has shown that the benefits of environmental regulations are enormous compared to economic costs. Yet, whenever the EPA proposes a new regulation, the impacted industries always, always cry foul.

In 1974, a Ford executive argued that if automobile fuel economy standards became law, the Ford product line could consist of all sub-Pinto sized cars. In 2001, GM's chief spokesman predicted that if the standard for trucks went up three miles per gallon, three miles per gallon, to 23.7 miles per gallon, they might have to stop making SUVs, four-wheel drive pickups, full-sized vans, and some two-wheel drive pickups. That is the top people at General Motors.

From what I saw on my commute to work this morning, this just hasn't happened. There are SUVs still on the street, even though the goal is 54.5 miles per gallon by the year 2025. In fact, the projected fuel economy standard of light trucks itself

in 2016 is 28.9 and 38.2 for automobiles. That is for 2016. We are well on our way to meeting the highest goals ever, 54.5 miles per gallon.

Industry also said the sky was falling when the EPA established the acid rain program. To respond to the harm sulfur dioxide was causing to public health and the environment, Congress amended the Clean Air Act in 1990. In response, the EPA issued a rule on sulfur dioxide and nitrogen oxide emissions from fossil fuel burning power plants and other sources. The Edison Electric Institute and Peabody Coal Company estimated that complying with the acid rain program would cause \$4 billion to \$5 billion per year.

By 2002, the acid rain concentrations in the Midwest were down by over 50 percent. Most Americans saw their electricity bills decrease. And in the end the Energy Information Administration found that the actual industry compliance costs were only about \$836 million, one-fifth of the industry predictions.

The health benefits of EPA regulations are clear and they are big. If the EPA hadn't taken action to protect the air and the water, our cities would still be thick with smog like China's are now. Our rivers would still be at risk for catching on fire. No critique of the EPA's Regulatory Impact Analysis can undermine the four decades of environmental regulatory

successes. The fact of the matter is that the EPA is doing its job protecting us from harmful toxins and pollution, and the value of a healthy, thriving society at the same time is priceless.

Thank you, Mr. Chairman.

[The prepared statement of Senator Markey follows:]

Senator Rounds. Thank you, Senator Markey.

Our witnesses joining us for today's hearing are Diana Furchtgott-Roth, Senior Fellow and Director of Economics<sup>21</sup> at the Manhattan Institute for Policy Research, welcome. William Kovacs, Senior Vice President in Environment, Technology & Regulatory Affairs at the United States Chamber of Commerce, welcome. Sam Batkins, Director of the Regulatory Policy at the American Action Forum, we welcome you today. Mary B. Rice, M.D., MPH, Instructor at Harvard Medical School, welcome. And Rena Steinzor, Professor at the University of Maryland Carey Law School, welcome today.

Now we will turn to our first witness, Dr. Diana Furchtgott-Roth, for five minutes.

Dr. Furchtgott-Roth, you may begin.

STATEMENT OF DIANA FURCHTGOTT-ROTH, SENIOR FELLOW AND DIRECTOR,  
ECONOMICS21, MANHATTAN INSTITUTE FOR POLICY RESEARCH

Ms. Furchtgott-Roth. Thank you very much, Mr. Chairman, but you flatter me, I am not a doctor. So I should just say that right for the record.

Senator Rounds. Thank you. I will correct the record.

Ms. Furchtgott-Roth. I am the author of five books, but I am not a doctor, at least not yet.

Well, as you said before, everyone wants cleaner air, and the question is what is the balance. Under current Federal regulations, the air is getting cleaner every year, as old equipment is replaced by new. Greenhouse gas emissions from power plants declined by 15 percent from 2005 to 2013. The carbon intensity of the economy has fallen by 23 percent since 2005, continuing a long decline since the end of the World War II.

Absent heavy regulatory intervention, the United States is already making great strides towards a cleaner economy. Sales of pickup trucks and SUVs, by the way, have soared precisely because they have a different miles per gallon fuel standard than do smaller cars, which is why Senator Markey saw so many of them on his way to work this morning.

Over the past two years, EPA has issued proposed or final regulations on emissions of mercury, ozone, and carbon. I would

like to discuss the problems with the cost-benefit analysis used for these regulations. I will first discuss the problems with the calculations of the benefits, then the calculations of the costs, and then with the discount rate.

The main problem with the calculations of the benefits are that the co-benefits of other substances are included. The carbon rule's putative benefits exceed its claimed costs not from reductions in carbon dioxide, say from the carbon rule, but from reductions in other substances, such as particulate matter, sulfur oxides, and nitrogen oxides. Without these alleged health benefits of these other substances, the rule would fail EPA's cost-benefit tests.

As can be seen by the table I provided in the testimony, the benefits listed for the Clean Power Plan in EPA's Regulatory Impact Analysis, which I have right here, by the way, all 500 pages of it, are about \$15 billion in 2025. But these benefits shrink to \$3.6 billion if the health benefits of other substances are removed. In the mercury rule, benefits shrink from about \$61 billion to less than \$100 million when the co-benefits of other substances are removed. For the ozone rule, benefits shrink from about \$29 billion to \$8.7 billion when benefits of other particulates are emitted.

These benefits, the net benefits, in other words, are accounting for the costs, are actually negative for mercury and

ozone, and barely positive for carbon.

While many States and localities are already in compliance with established national ambient air quality standards for NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter, by claiming benefits from further reducing below the established safe level, EPA is in effect lowering the established standard without going through the legal requirements of a rulemaking focused on the relevant standard.

EPA is adopting a regulation for carbon, mercury, and ozone that does not yield enough benefits to justify the cost. Instead, the agency is using supposed other benefits. And as we all know, particulate matter, SO<sub>x</sub> and NO<sub>x</sub>, are already regulated under other rules.

Other problems are a double counting of health benefits from particulates. It is not clear that EPA is accurately accounting for all of its claims of particulate matter reduction benefits across many rulemakings. If, for example, there are health benefits, such as reductions in asthma, from one rule, one cannot count those benefits as reductions from a second rule because they will have already taken place. And it is not clear that double counting is not taking place.

Third, there is the assumption that benefits that all particulates are equally harmful and some particulates might be more harmful than others.

Fourth, there is the assumption that reductions in particulates have equal value independent of their base level, basically saying that reductions in particulates in New York City are equally valuable from reductions in particulates up in New York State, which has less levels of emission.

It is very important that there is reliance on benefits from reductions in asthma, because over the past 25 years, as the air has got cleaner, incidents of asthma has arisen. Asthma is associated with obesity and lack of exercise, and if these trends are not reversed, then it is not clear that there will be any further reductions in asthma from particulate matter.

There are also problems with the costs, major ones being that future increases in electricity prices are not accounted for. The EPA analysis specifically says there will be no effects on small business. They do not account effects of increases in electricity prices in small business.

They omit the cost of energy-intensive industries going offshore. In other words, if we regulate them here, the EPA assumes that the emissions are going to disappear. But if they go to China or they go to Mexico, the emissions are going to stay the same and we are not going to have climate benefits. In fact, they might be even worse because China and Mexico have lower clean air regulations than we do.

There are also problems with the discount rates that EPA



uses, which are below the standard business rates. Business rates are often in the range of 10 percent. EPA uses discount rates that are 3 percent and 7 percent, and the benefits are discounted at a lower rate from the costs, which wouldn't be allowed in most analyses.

Thank you very much for giving me the opportunity to testify today.

[The prepared statement of Ms. Furchtgott-Roth follows:]

Senator Rounds. Thank you, Ms. Furchtgott-Roth. Thank you.

Now we will hear from Mr. William Kovacs.

Mr. Kovacs, you may begin.

STATEMENT OF WILLIAM L. KOVACS, SENIOR VICE PRESIDENT,  
ENVIRONMENT, TECHNOLOGY & REGULATORY AFFAIRS, U.S. CHAMBER OF  
COMMERCE

Mr. Kovacs. Thank you, Mr. Chairman, Ranking Member Markey, and members of the committee for inviting me to testify today on the oversight of Regulatory Impact Analysis for EPA Regulations.

Regulations are needed for an orderly society to protect health and the environment. But we must keep in mind that agencies are not an independent branch of government; they are not a fourth branch. Rather, they were created by Congress to implement congressional policy.

In 1946, Congress enacted the Administrative Procedure Act, which is the bible of the administrative state, which delegates legislative and judicial powers to agencies. Over time, Congress passed numerous ambitious and broad bills that required agencies to fill in more and more of the details. Also over the same period of time, courts granted more and more deference to agency action.

The result of this expanded gap-filling authority and greater judicial deference created a shield around agency action. In short, while the Constitution made your job in the Congress to legislate very difficult, as we now know, Congress and the courts made legislating by agencies very, very easy.

For several decades, Congress has tried to reign in this growing power of agency through the passage of numerous, but toothless, statutory requirements like the Unfunded Mandates Act Reform, Information Quality, Regulatory Flexibility. Presidents from Jimmy Carter forward have issued executive orders to rein agencies in and instruct them how to do their job, all to no avail.

The requirement for the Regulatory Impact Analysis comes from this effort. If used correctly, these tools assist regulators to understand the need for regulation, available regulatory alternatives, the costs and benefits of the regulation, the best available facts and how to get them, the impact of the regulation on jobs, and whether a regulation imposes unfunded mandates on State and local governments.

Considering that the Administrative Procedure Act has not been amended since 1946, and the agencies have published over 200,000 regulations, I must state that the APA, for routine regulations, generally works well. However, in the last few decades regulations have been issued that are extremely complex, costing billions of dollars annually, and impacting large segments of the economy.

When agencies aggressively legislate, that is, when the agencies expand a few words or a few hundred words in a state into thousands of pages of regulatory mandates, the agency is

legislating. It is that simple. And when legislating, the agency should be required to use all the tools provided by Congress and executive orders if it is to be given any court deference.

Citizens should also be able to hold agencies in check and challenge the agency for failing to use these RIA type tools.

And since today's focus is on EPA, it must be stated that EPA issues more rules costing over \$1 billion a year than all other agencies combined. Between 2000 and 2014, all Executive Branch agencies issued 31 rules costing over \$1 billion a year, and EPA issued 18 of those.

In the last five months, EPA has issued three more mega-rules: Waters of the United States, Clean Power, and Ozone, without the use of many of the RIA tools. Had EPA undertaken a cumulative impact analysis of the three rules, examined the unfunded mandates it was imposing on State and local governments, hosted a small business review panel, evaluated the impacts on employment, the agency would have had a much deeper appreciation of the massive requirements it was imposing on State and local governments and the private sector.

For example, States implement approximately 96 percent of all EPA's delegated programs, and the Federal Government pays 25 percent of that cost. Therefore, the States find themselves literally commandeered by EPA to simultaneously implement WOTUS,

CPP, and ozone. And when you try to implement three major acts, one covering the air, one covering the water, you have a lot of moving parts, and where you might be regulating waters you are finding out you have to put a new gas line and you may need a dredge and fill permit. So it is not as simple as that.

So to address this issue there are several things. I think the Senate should pass the Regulatory Accountability Act or some equivalent that codifies the RIA requirements into environmental law.

Thank you very much. I would be glad to answer any questions.

[The prepared statement of Mr. Kovacs follows:]

Senator Rounds. Thank you for your testimony, Mr. Kovacs.

Our next witness is Mr. Sam Batkins.

Mr. Batkins, you may begin.

STATEMENT OF SAM BATKINS, DIRECTOR OF REGULATORY POLICY,  
AMERICAN ACTION FORUM

Mr. Batkins. Chairman Rounds, Ranking Member Markey, and members of the committee, thank you for the opportunity to appear today. In this testimony I wish to highlight the following points:

First, by virtually any metric, regulatory activity has increased at EPA. This is due to a variety of factors, but recently the Agency has finalized five regulations that impose more costs than benefits.

Second, the Nation appears to be experiencing declining returns in air quality investments. Despite \$12 billion in investments from the Obama Administration, air quality gains have not been as pronounced as in the past.

And, third, the rise of particulate matter and the social cost of carbon has made it easier for EPA to justify regulation. For example, in 2010, PM<sub>2.5</sub> generated 100 percent of the benefits from four air quality regulations.

The Office of Information and Regulatory Affairs, OIRA, recognizes EPA as the number one regulator in the Federal Government. From 2003 to 2013, the Agency has issued 34 major rules, or 21 percent more than the next closest agency. As measured by rules that attribute the Unfunded Mandates Reform Act, EPA has increased from the pace of 1.75 annually to 3.1.



The amount of paperwork EPA imposes has also increased, from 142 million hours in fiscal year 2004 to more than 163 million hours today, a 15 percent increase. These burdens have benefits to the American people, but, in a recent trend, the Agency has finalized five rules where costs exceed the benefits.

The Supreme Court recently reaffirmed the general principle that regulatory benefits should justify the costs. Every executive order since the Carter Administration has affirmed this goal, and as Justice Scalia wrote in *Michigan v. EPA* early this year, no regulation is appropriate if it does significantly more harm than good. Yet, five recent EPA measures could impose \$1.3 billion in annual costs, compared to just \$700 million in benefits.

On the declining returns on air quality investments, despite at least \$12 billion in clean air rules since 2009, the rate of improvement has slowed in recent years. EPA describes very unhealthy days as health warnings of emergency conditions. For this category, the national air quality has not improved. In 2005, there were 46 very unhealthy days; in 2014, there were also 46 very unhealthy days.

Now, there are likely a variety of factors behind this figure, but these extreme days recent regulation has not alleviated the problem. Air quality gains have also slowed somewhat recently. For example, from 2005 to 2009, the rate of

unhealthy days per jurisdiction declined by 20 percent. Compare this for the recent decline during the Obama Administration of 9 percent. The slowing improvement in air quality under the Obama Administration is in concert, of course, with a more, not less, active EPA.

On the rise of PM2.5 and the social cost of carbon, the Agency, and the Federal Government as a whole, is increasingly reliant on particulate matter co-benefits to justify regulation in other areas, as has been mentioned. For example, the 2008 NAAQS for ozone derived 70 percent of its benefits from reductions in particulate matter. Notably, in 2010, PM2.5 generated 100 percent of the benefits from four air quality regulations.

Perhaps most famously, the Agency's Mercury Air Toxic Standard, or MATS rule, derived more than 99 percent of its benefits from the reduction of particulate matter. Even though the goal of the regulation was the control of mercury, toxic gases, and other heavy metals, mercury contributed just 0.007 percent of the rule's benefits.

On the social cost of carbon, the Administration has generally ignored longstanding guidance and excluded a 7 percent discount rate from its analysis. As Circular A-4 states, "As a default position, a real discount rate of 7 percent should be used as a base-case for regulatory analysis." Using lower

discount rates on the social cost of carbon allows EPA to more easily justify a variety of regulatory action. For comparison, the United Kingdom uses a central case discount rate of 6 percent and a higher rate of 10 percent for sensitivity purposes.

I would also like to point out that we are getting a sort of steady stream of retrospective studies that have called into question some of EPA's regulatory assumptions, including a recent one on greenhouse gas regulations for heavy duty trucks. A Resources for the Future study concluded that EPA underestimated the rebound effect of increased truck efficiency. This higher rebound effect, in the words of the study, lowers projected long-run fuel savings and greenhouse gas emission reductions. In the end, the actual rebound effect was four to six times larger than what EPA had assumed.

Thankfully, this research might inform EPA's final rule for the second round of heavy-duty truck regulation, which has a projected total cost of more than \$31 billion. But how many other regulations have regulators and scholars missed over the years, and what is the ultimate impact of those regulatory errors? How do we learn from these past mistakes and false assumptions to shape the future of regulatory policy?

Thank you for your time, and I look forward to answering your questions.

[The prepared statement of Mr. Batkins follows:]

Senator Rounds. Thank you, Mr. Batkins.

We will now hear from our next witness, Dr. Mary Rice.

Dr. Rice, you may begin.

STATEMENT OF MARY B. RICE, M.D., MPH, INSTRUCTOR IN MEDICINE,  
HARVARD MEDICAL SCHOOL, PHYSICIAN, DIVISION OF PULMONARY,  
CRITICAL CARE & SLEEP MEDICINE, BETH ISRAEL DEACONESS MEDICAL  
CENTER

Dr. Rice. Chairman Rounds, Ranking Member Markey, and members of the subcommittee, thank you for the opportunity to testify today. My name is Dr. Mary Rice, and I am a pulmonary and critical care physician at Beth Israel Deaconess Medical Center at Harvard Medical School, and I care for adults with lung disease, most of whom have severe asthma or emphysema. I also care for critically ill adults in the intensive care unit.

You have my written testimony before you and there are a few points that I would like to emphasize today.

First, it is now well established that exposure to outdoor air pollution, including ozone, particulate matter, mercury, and other air pollutants regulated by the EPA, is bad for human health. This has been known for decades. I will focus just on two of these pollutants, ozone and particulate matter, because their health effects are so extremely well described through hundreds and hundreds of research studies.

Ozone is a respiratory irritant that is particularly harmful for people with lung disease, including people with asthma and emphysema; and ozone also harms the lungs of babies and young children, and even healthy adults. Research,

including my own work with colleagues at Harvard, has shown that normal adults, when exposed to ozone at levels above 60 parts per billion have lung function that is not as good as when the ozone levels are lower. And for the elderly and those with heart and lung disease, ozone increases the risk of death.

Particulate matter pollution has been recognized as a cause of premature death since the early 1950s, and today it is clear that particulate matter also aggravates respiratory disease, including asthma and emphysema, and is a major trigger for devastating cardiovascular events such as heart attack, stroke, and heart failure.

Second, the research evidence that has accumulated over the past three decades for these health effects of air pollution is comprehensive and consistent. Studies have used multiple scientific methods, including animal toxicology, human exposure, observational epidemiology, and natural experiments; and together these studies clearly show that exposure to ozone and particulate matters, at many cases at levels permissible by the EPA, is bad for children and adults.

Third, our experience here in the United States has confirmed that when air pollution levels go down, health improves. A steel mill closed for a few months in Utah Valley, and the number of bronchitis and asthma emissions for preschool-aged children in that Valley fell by 50 percent. Traffic and

ozone levels declined sharply during the 1996 Atlanta Olympics and fewer kids had asthma attacks in the City of Atlanta.

Particulate matter levels declined dramatically in Southern California, and children with and without asthma experienced greater growth in lung function. And, nationwide, particulate matter levels declined in the 1990s and 2000s, and this added months to U.S. life expectancy. When air pollution goes down, health improves and people live longer.

Fourth of all, these are real people I am talking about. I focus a lot on asthma because I am a lung doctor and because it is abundantly clear that air pollution makes asthma worse. One of my patients, for example, is a 24-year-old African-American man who came to the City of Boston from the rural Midwest where he was a star athlete in college and he landed himself a brilliant job in finance in the city. And ever since coming to Boston, this young man has been struggling with asthma attacks every few weeks.

Boston is a city that is generally compliant with EPA clean air standards, and he had to quit exercise for a month during peak ozone levels this summer due to labored breathing. He had severe coughing fits at work that forced him to walk out of meetings, and just keeping up with all the nebulizer treatments, doctor visits, and x-rays have caused him to miss a lot of work since starting his new job. He also feels exhausted and short



of breath and miserable during these asthma attacks. This young man has an incredibly bright future ahead of him, and asthma attacks are getting in the way of that future.

My older patients with severe asthma or emphysema can't continue to work when their disease gets worse. They go to the emergency room and are often hospitalized. Air pollution increases the risk of hospitalization for my patients and for people across the United States with lung disease. When air pollution goes down, their risk of getting sick goes down too.

Lastly, is it any surprise that the benefits of EPA regulation to reduce air pollution are so great that they exceed costs? We breathe the outdoor air. Therefore, the health benefits of cleaner air are enjoyed by millions.

While economists may debate the dollar value of avoided asthma medications, emergency room visits, hospital stays, or even the value of additional months of life that are brought by cleaner air, these health benefits are real, they are measurable, and they are clearly supported by the science.

Thank you. I would be very happy to answer questions.

[The prepared statement of Dr. Rice follows:]

Senator Rounds. Thank you, Dr. Rice.

Our next witness is Ms. Rena Steinzor.

Ms. Steinzor, you may begin.

STATEMENT OF RENA STEINZOR, PROFESSOR, UNIVERSITY OF MARYLAND  
CAREY LAW SCHOOL AND MEMBER SCHOLAR AND PAST PRESIDENT, CENTER  
FOR PROGRESSIVE REFORM

Ms. Steinzor. Thank you, Mr. Chairman, Ranking Member Markey, and members of the subcommittee. I appreciate the opportunity to testify today.

EPA's work on cost-benefit analysis is the gold standard for all other government agencies. Its elaborate and meticulous studies conclude that benefits exceed costs. In fact, in the case of the Clean Air Act rules that Dr. Rice was just talking about, which are reserved for especially irrational condemnation by regulated industries, benefits exceed costs by a margin of 30 to 1. Rather than focus on the few marginal improvements that the GAO has recommended and that EPA is already addressing, I urge the subcommittee to applaud the Agency's diligent, thorough, and creative efforts to carry out one of the most difficult elements of its mission to preserve environmental quality.

Few agencies have a more important role in improving public health than EPA. Just ask anyone whose children escaped brain damage because the agency took the lead out of gas, who turns on the faucet knowing the water will be safe, or who is unfortunate enough to live in an area afflicted by smog and is counting on EPA to lower the emissions that aggravate the asthma that

afflicts so many Americans.

As for the charge that an EPA-induced regulatory tsunami will cause irrevocable damage to the economy, the truth is that these rules and the civil servants who write them do not sweep industries' hard-earned money into a pile and set it on fire for no good reason. The regulations impose costs, and it is certainly appropriate to consider estimates of these financial burdens when deciding whether to promulgate a rule.

Yet, as illustrated by Clean Air Act protections, EPA rules also deliver tremendous benefits. Ignoring these benefits has become standard practice in every one of the multiple fora organized by regulated industries to demonstrate EPA's perfidy.

This approach is both biased and unsupportable from any objective perspective. The rules are required by statute. The appropriate remedy is to amend the law if you disagree with the statute, not cripple the Agency by stealth through budget cuts and excessive and redundant analytical requirements.

Because of the business community's perception that EPA's popular mandate to clean up pollution would produce expensive rules, the Agency has experienced intensive scrutiny from its inception and was a pioneer in developing cost-benefit analysis. It performs such analyses today with sophistication, doing its best to produce reliable numbers from a methodology that is anything but precise.

In fact, the most significant flaws inherent in cost-benefit analysis as it is practiced today are the pronounced understatement of benefits and significant overstatement of costs. Costs are inflated because EPA analysts have little choice but to rely upon companies they propose to regulate for the empirical data that underlies cost estimates, and such parties have ample incentives to inflate those numbers, as Senator Markey explained so eloquently at the beginning of the hearing.

As for the propensity of cost-benefit analyses to understate benefits, the problem arises because EPA often confronts benefits that are difficult to monetize or turn into dollar amounts. What is the value of avoiding a severe asthma attack that does not require hospitalization, for example? The person experiencing such an attack is miserable for a time and may suffer some increment of long-term adverse effects on her health, but she does ultimately recover from the attack. EPA has great difficulty when it attempts to monetize this suffering.

EPA and other agencies have encouraged by OIRA to describe such implications without crunching numbers, but the reality is that any value not translated into a number most often gets lost in the shuffle. The Agency staff can write eloquently about brain damage suffered by infants, the likelihood that key elements of an aquatic system too small to be cooked for dinner

will disappear as a result of water pollution, or the effects of sea level rise on iconic American cities. None of this narrative has anything close to the impact of a number crunched in a comparable fog of uncertainty.

Thank you.

[The prepared statement of Ms. Steinzor follows:]

Senator Rounds. Thank you for your testimony, Ms. Steinzor.

Senators will now each have five minutes for questions, and I will begin.

For Mr. Kovacs, in the Chevron deference by the courts, it has allowed the agencies to promulgate increasingly broad and wide-ranging regulations so long as they are not arbitrary and capricious. What, if any, impact do you believe King v. Burwell could have on the amount of deference the courts show agencies in the future when their regulations are challenged?

Mr. Kovacs. Well, the King v. Burwell was really the first time in decades that the court has set a different type of standard other than deference for agency review, and it took the position that on those broad-ranging cases where there is deep political and social change, that the court was actually going to almost do a de novo review; and that is really welcomed because for the last 30 or 40 years the difficulty has been that when Congress delegates authority to the agencies to fill in the gaps and then the agencies fill in more and more gaps, and then the courts, through deference, give away their power to interpret laws, you end up in a position where the agencies really are not accountable.

So the Burwell case, for the first time, brings the court back in and says at least for those mega type regulations we are

going to take a much more detailed view and we are not going to grant the deference. So we welcome that.

Senator Rounds. What, if any, impact will the recent ruling in Michigan v. EPA have in the way that the EPA goes about conducting economic analysis for future regulations?

Mr. Kovacs. I think the Michigan case, for the first time, gets rid of the assumption that no matter what happens, no matter what EPA does, it doesn't have to look at costs. And for certain types of regulations, and granted, these are the toxics, it indicated that appropriate and necessary had to include under any reasonable set of circumstances costs. It really goes to what we would call truth in regulating.

What we are hoping that the agencies will do is just be honest. And the reason why we need that is because if they are overregulating in one area, it means they are not spending money in another area that might need it. And if you have truth in regulating, the agency, for the first time, would have said in the Michigan case 4 percent, 5 percent of all the benefits went to mercury and the other 96 percent initially went to SO<sub>2</sub> and then the converted that to PM<sub>2.5</sub>. And what we are saying is go back to really the Clinton Administration, where they said we are looking at this particular particulate and it costs this much per ton to take it out of society, so that you have some idea of what it is that we are getting for the money we are



spending.

Senator Rounds. Thank you.

Ms. Furchtgott-Roth, in your testimony you say that in the Clean Power Plan specifically EPA is understating the costs of the regulation to the U.S. economy. Can you elaborate on what the costs the EPA is underestimating and explain how you believe the regulation would be different if the EPA had accurately stated all aspects of the costs of the regulation to the economy?

Ms. Furchtgott-Roth. The major cost that is omitted is the cost to small businesses and businesses from the increased cost of electricity, the rise in the cost of the electricity. So here is this Regulatory Impact Analysis and on page 7-7 it says the EPA certifies that this action will not have a significant economic impact on a substantial number of small entities. And this action does not contain an unfunded mandate of \$100 million or more.

Well, here is a situation where States or groups of States, depending if they use rate-based or mass-based, are going to have to cut back on their emissions-producing industries, power plants, energy-intensive factories. This is definitely going to have an economic effect, not just because these entities cut back their activities, but also because there are other firms, such as restaurants, dry cleaners, you can imagine, movie

theaters, that depend on the activities of these large entities that are going to be cut back.

In my testimony I show a chart based on EPA data that shows how much emissions are going to have to be cut back in different States. And, in fact, Mr. Chairman, your State actually is a winner. Your State is actually going to be able to increase its amount of carbon, but it is one of the few States that vote Republican that does. Most of the cutbacks are in Republican States, and most of the States where increases are allowed are Democratic States.

Senator Rounds. Yes. And the unfortunate part for my consumers living in South Dakota is that they purchase their power from the States around them, which are going to have to have increases in costs passed on to them.

Ms. Furchtgott-Roth. Right. Exactly.

Senator Rounds. Thank you for your testimony.

My time has expired. Senator Markey?

Senator Markey. Thank you, Mr. Chairman, very much.

Professor Steinzor, it is my understanding that the Office of Management and Budget guidance for Regulatory Impact Analysis directs, directs Federal agencies to count the additional co-benefits of regulations and accounting co-benefits has been the longstanding practice of Republican and Democratic administrations alike. Is that true?

Ms. Steinzor. Yes.

Senator Markey. So in order for the EPA to do their Regulatory Impact Analysis correctly, they need to count the additional co-benefits of the Clean Power Plan, the mercury rule, the ozone rule, is that correct?

Ms. Steinzor. Yes.

Senator Markey. Okay. So that means that if reducing ozone and particulate matter have real benefits to public health, even if those reductions come from regulations targeting other pollutants like mercury.

Ms. Steinzor. Yes. And it is also worth noting that they also subtract costs that are imposed by other rules. They don't do it in a one-sided way.

Senator Markey. So, in other words, if there is a rule that says that a company has to reduce the amount of mercury it is sending up into the atmosphere, and simultaneously that rule also has the simultaneous benefit of reducing the amount of smog that is going up into the air or soot that is going up into the air that could wind up in the lungs of children and cause harm, the EPA could count that, and both Democrat and Republican administrations have counted that as a co-benefit. Even though you are trying to reduce the mercury, you are reducing this material that can go into the lungs of children, attach themselves to the lungs of children. We call it soot, we call

it smog, or you can call it sulfur dioxide. You can get technical, but what ordinary people call it, it is a benefit, right?

Ms. Steinzor. Yes.

Senator Markey. And there isn't really a debate at any OMB that it should be counted, is that correct?

Ms. Steinzor. No.

Senator Markey. Oh. Well, that is important for us to know, because there are a lot of people who don't want to count those co-benefits, but that is really not the practice. And it is obvious why it is not the practice, because the benefits are so obvious if children are protected from these harms. If asthmas aren't as frequent from these harms, you have to add that up because that is going to be factored into how much it cost that company to keep the mercury from going into the sky. And if you add up the total benefit in that area, it is obviously going to be quite significant.

So let's just talk to you, Dr. Rice. How does increased exposure to ozone impact the health of children and other vulnerable populations?

Dr. Rice. Thank you, Senator Markey. That is an issue of great concern to me and other doctors in the field of respiratory medicine because the evidence, as I mentioned, is very clear that exposure to particles and to ozone increases the

risk of a number of bad respiratory health effects in children and also in adults.

Just to give you a few examples, it is now clear that exposure to ozone increases the risk of respiratory emissions for very small babies in the first month of life.

Senator Markey. And, again, ozone is?

Dr. Rice. Smog.

Senator Markey. Smog. Right. Go ahead. Keep going.

Dr. Rice. At levels that we experience today.

Senator Markey. So if we put babies into smog, it is going to cause real problems. Is that what you are saying?

Dr. Rice. That is what the evidence shows and that is what our experience has demonstrated when we look at the data of the exposure to ozone and the rates of hospital emissions in children.

It also affects young kids, not just babies, but school-aged children. It increases the risk of having an asthma attack, landing in the emergency room for asthma attacks. There is evidence that children born to African-American mothers are at even higher risk of having an asthma attack when ozone levels go up.

Senator Markey. Thank you.

Professor Steinzor, EPA ranked fifth out of the 22 U.S. regulatory agencies in report card comparison on cost-benefit

analysis performed by the conservative Mercatus Center at George Mason University. Professor Steinzor, do you agree that the EPA produces some of the most sophisticated cost-benefit analysis in the entire Government?

Ms. Steinzor. Yes, I do, and I think the reason for that is that because the agency has been subject of special focus at the White House since President Nixon was elected, it has endured trial by fire and it has been perfected, it has been rigorously criticized and has responded, and does an excellent job.

Senator Markey. God bless Richard Nixon and the fantastic job he did on these environmental issues.

Ms. Steinzor. Well, he created EPA.

Senator Markey. God bless him. And we thank God he did that. So I just want to get that out on the record as well.

[Laughter.]

Senator Markey. And I want to thank all of the witnesses for being here. I would also note that since 1990 Massachusetts has reduced its greenhouse gases by 40 percent and increased its GDP by 70 percent, just so that you can see the huge disconnect between the reduction in the harmful stuff and the increase in the beneficial job creation simultaneously.

Thank you, Mr. Chairman.

Senator Rounds. Senator Inhofe.

Senator Inhofe. Thank you, Mr. Chairman.

Senator Markey and I were both in the House at the time of the Clean Air Act amendments in 1990. You could use the same analogy here to say that if we are doing such a good job, why do we have to go into such a huge cost for the American people to come up with more regulations.

I had requested, when I had to go down to Armed Services and come back up here, this document. It is from the EPA and this kind of fortifies what you are saying. It says that between 1980 and 2014, gross domestic product increased 147 percent, vehicle miles traveled increased 97 percent, energy consumption increased 26 percent, and U.S. population grew by 41 percent. During the same period, total emissions of the six principal air pollutants dropped 63 percent. That is there. And I think we have been doing a very good job. I was a cosponsor, as I suggest you were too, at that time.

So some good things are happening and it seems like the people on the left will always talk about how dirty everything is and really don't talk about the successes that we have had, and I appreciate Senator Markey talking about those successes.

Mr. Kovacs, in the last subcommittee hearing Senator Rounds held, we received testimony on the EPA's rampant use of sue and settle tactics to achieve its aggressive regulatory agenda. That is the subject of this hearing today. Even GAO confirmed

sue and settle agreements can lead to gaps in EPA's cost-benefit calculations. So I would ask you to make a comment on what impact the sue and settle deadlines have on the EPA's cost-benefit calculations.

Mr. Kovacs. Well, one of the difficulties with sue and settle is that if EPA is putting out 400 rules in the course of a year and they are sued on, let's say, 15 of those and they enter into a sue and settle agreement. What happens once the court enters the consent decree is EPA is really under a court order to push those 15 regulations to the front of the line. Many times when they are put in the front of the line they are on extremely tight deadlines, Boiler MACT, for example, even Utility MACT. What happens is they are taking a very complex issue and jamming it into a short period of time.

What usually happens is they avoid forming the small business advisory panels; they avoid doing an analysis of what it is going to do to the States and unfunded mandates; they avoid doing Information Quality Act. What they do is they push it out and then the litigation continues. I think that is one of the reasons why there is so much litigation with EPA, is because they are constantly jammed and constantly missing deadlines.

Senator Inhofe. Okay, I appreciate that. I have two other questions. I am going to try to get them out kind of quickly.



The next one is for you. Today's hearing is important to understanding how EPA decides the who and the what, the where, the when, the why prior to issuing a regulation, because once it is final it may be too late. The best example of that is this summer the EPA Administrator McCarthy shrugged off concerns over a court potentially vacating the mercury rule because "the investments have been made." Another way of saying that is the damage has already been done. So in the case of the mercury rule we know what has happened with that.

I would ask you, how robust was the RIA in making the case for the final regulation, which we now know has been overturned by the Supreme Court?

Mr. Kovacs. Well, I think just look at the testimony, really, or the letter from small business council of advocacy. They made it very clear that EPA did not really talk to small business; they did not really try to understand what the impact was going to be on States. What happens when you have a regulation, a regulation, in my mind, is harder to get rid of than a law, because you can sue under it even if you change it.

What happens is once the process goes into effect, it is there until it is overturned. They have tried, on Utility MACT, for example, several times to get a stay of it and they could not get a stay. So what happens is the regulation is in effect, the industry and the regulator community is going to be

implementing that.

Senator Inhofe. And in the case of Utility MACT the damage was done.

Mr. Kovacs. It was done. And when the Supreme Court decided to send it back, at that point in time there was nothing that could be done, the damage was done. And I just put in a push for the Coats bill, which says that on those few large mega regulations, those over \$1 billion that have national impact, and there are only a few a year, that there should be some mechanism to allow the regulated community to get a stay.

Senator Inhofe. Well, and I know a lot of the people who were already hurt not just because it had gone into effect, but because they were anticipating it was going to be going into effect, so they had done their fuel switching and everything else, anticipating that.

The other thing I wanted to bring up, and you can just answer it real quickly, this is for Mr. Batkins. I was the bad guy, as Senator Markey knows, back in 2002, and 2003, and 2004, and 2005 when they first started coming to the world coming to an end, global warming and all that. I actually, at that time, was the majority and chair of the subcommittee that Senator Rounds chairs now, and at that time I thought that was probably true until I found out the cost of this thing.

At that time it was from Senator Markey's own MIT came out

with the cost. The cost range at that time was between \$300 billion and \$400 billion, and that was for the legislation that had been introduced. At that time it was introduced by McCain and Lieberman, I guess it was. And then Charles Rivers came along, they came along with the same approximate cost.

So we know it is a very costly thing. So I think it was necessary for those on the other side to come up with something to offset that argument, so they came up with the social cost of carbon.

Now, I would like to ask you, Mr. Batkins, the figure to claim alleged benefits of its climate regulations, what are some of the shortcomings with the current SCC figure?

Mr. Batkins. Well, there is a lot of tension between the social cost of carbon on Circular A-4 and the Clean Air Act. What you will see broadly is, again, climate change, global climate change, so these are going to be generally global benefits accruing. So we have a majority of the benefits going overseas. For example, the Clean Power Plan, according to EPA's estimate, had \$8.4 billion in costs.

These costs are borne domestically, but a majority of the benefits are borne internationally. Again, it is a difficult task when we talk about projecting costs and benefits out to 2100 or 2300. We are talking about generations.

There is also the issue of the discount rate. I mentioned

Circular A-4 generally prefers a discount rate of 3 and 7 percent; other nations have slightly higher. And for this discount rate, just to give you an example of the range that we can have in social cost of carbon, depending on the discount rate, this year the social cost of carbon could be \$12 per ton or \$120 per ton. So there is generally a lot of tension between the social costs of carbon and what you will see with Circular A-4 and the Clean Air Act.

Senator Inhofe. Good answer. Thank you.

Senator Rounds. Senator Vitter.

Senator Vitter. Thank you, Mr. Chairman.

And thanks to all of you for your testimony.

Ms. Furchtgott-Roth, thank you for your testimony. Back in 2013, when I was ranking member of the committee, I procured a commitment for EPA's Science Advisory Board to pull together a group of economists to review how the Agency does economic modeling and a cost for cost and benefits, and it has taken them forever to get organized, but they finally are convening their first panel of experts this week. There are at least a few on the panel, I am happy to say, who seem truly independent.

What would be the top three or four things you would suggest those experts focus on in terms of how EPA currently quantifies costs and benefits?

Ms. Furchtgott-Roth. With regard to the co-benefit issue,

if ozone and mercury have harmful effects, as other witnesses were saying, we should be able to see that in the cost-benefit analysis without the co-benefits. If EPA thinks that we have levels of particulates that are too high, then it should be able to issue a separate rule and look at those separately, because right now, according to EPA, the level of particulates, that standard is fine. Many places all over the Country are in attainment. So by saying that we are getting benefits from different levels of particulates, EPA is implicitly saying that its standard is not correct. So that is one particular error.

I think also the costs of increased electricity prices have not been factored in. The costs on small businesses have been minimized. NERA, an economic consulting firm, says that the costs of electricity would rise by 17 percent, causing about \$473 billion of damages.

Most important, the climate benefits, we will not see these climate benefits if firms just relocate, because the same emissions will go out in the air and we won't have any reduced effect on global warming. We might have a greater effect, in fact, because other countries don't have as strict standards as we do, and those, right now, are not counted in the analysis. It is just assumed that emissions, if we regulate them, are going to go away. Same with the health benefits. We know that dirty air also travels.

Senator Vitter. Okay, thank you very much.

Dr. Rice, thank you for being here as well. I have a pretty simple question that I think you can speak to as a doctor. It is my understanding that there is ample evidence and research that shows that there are real human health impacts from unemployment increases, areas with high unemployment. Some of those impacts include increased rates of alcoholism, child neglect and abuse, impacts on mental health.

So my question is simply this: Do you believe it is accurate that there can be human health impacts from increases in unemployment, someone losing their job, potentially not being able to care adequately for their family?

Dr. Rice. Thank you for that question, Senator Vitter. As I also mentioned in my testimony, when people don't have their health, that impairs their ability to work and to perform well and to get sleep and to keep their job because of doctor appointments that they might have. So you are absolutely right, there is a complicated intersection between health and employment. And I hope I have answered your question.

Senator Vitter. I don't think you really have. So do you think there is a clear relationship between higher unemployment and negative health impacts on the population?

Dr. Rice. I am a pulmonary doctor and I am not an expert on employment specifically as an exposure. But I agree

generally that the better people are doing in all kinds of ways, and there are all kinds of exposures that affect health, and when people don't have their health they also can't work as well. So it is a complicated issue.

Senator Vitter. Okay. I would point to, in particular, there are lots of studies, but one is an American Academy of Pediatrics study that was presented at an exhibition in San Francisco that goes directly to this. In fact, one of the top predictors of health is income, employment, economic status.

Could I have a little bit more time, Mr. Chairman?

Senator Rounds. Certainly.

Senator Vitter. Thank you.

Just one other question for Mr. Kovacs. Another agreement I procured from EPA back in 2013 as ranking member was that they would finally provide the scientific data underlying the key studies that go to some of their past regulatory actions and would de-identify personal information so that that data would be available and could be independently reviewed. Now, they have done a little bit of that and they have stonewalled on a lot of that, saying that they somehow can't de-identify data, can't take personal information out.

Do you believe it is credible in 2015, with current technologies, that it is not possible to de-identify datasets, particularly datasets developed in the 1980s, to protect truly

confidential patient information, but make these de-identified datasets available for independent analysis so we can judge and folks independently can judge if they really justify what EPA has pushed forward in terms of regulation?

Mr. Kovacs. Well, it is certainly my understanding that even HHS de-identifies data and shares it with researchers. That I am fairly confident of and that happens every day. What you are referring to is the Pope and Dockery study. The reason this entire issue has become so contentious is because the Pope and Dockery studies in the late 1990s became the basis for literally all the studies that are going on today. And when Congress passed the Information Quality Act, it required that the data be peer-reviewed and that it be reproducible.

And the difficulty that we are facing as we talk about all these outcomes, and why I have tried to get the regulations right as opposed to worrying about the outcome, is that no one can really determine whether or not, if this data is not correct, without getting the information to the public for checking on reproducibility, we are all sort of stuck and we are arguing about something we may not know the answer to, but it is easy to find.

Now, EPA has been asked for the data and they said they don't own it, they say Harvard owns it, and we have been fighting over this for, I don't know, 20 years and this is the



difficulty. And if there is anything that I can communicate in terms of my testimony, it is the regulatory process works for Congress and citizens, not for agencies, and we need to be able to have a process where we are open and transparent, and the data can be put on the table and we can actually deal with what is right, what is wrong.

If we are going to regulate PM2.5, we have a statute where we can regulate it. If we are going to regulate SO2, we have a statute under NAAQS. And if you are going to regulate mercury, you have two, you have 111 and 112. But let's do it right and let's do it honest and let's do it transparently.

Senator Vitter. Thank you very much.

Dr. Rice. Senator Vitter, may I comment on that issue of the air pollution studies in Pope and Dockery? Would that be all right?

Senator Rounds. Quickly.

Dr. Rice. There have been hundreds and hundreds of studies on the issue of air pollution and mortality. Pope and Dockery was one of them. That was one of the earliest ones. I am not quite sure what Witness Kovacs means by the basis for all the other air pollution studies. There have been studies using all sorts of methodologies, and not all of them have taken place in the United States; some excellent studies in Europe and Asia as

well. And this evidence overwhelmingly supports that there is an association between particulate matter exposure and death.

Senator Vitter. Well, just to clarify, I think the point was correct that that study in particular is a huge basis for both major EPA action and other related studies, and we have never gotten the data sets de-identified so that can be independently reviewed. I think that is the major point.

Senator Rounds. Thank you, Senator Vitter.

The purpose for this oversight hearing in the first place is to look at the analysis which is done by an agency within the Federal Government, the EPA. Whether you believe in the processes, as Senator Markey shared, whether you look at the impacts and the costs to the actual economy, as Senator Inhofe has shared, there is a common theme here that I think we would all agree on. That is, to be able to point at a process which provides confidence to the American public, one that you look at and you review and you find out what is working correctly and what may not be working correctly. That is when you begin to put together the confidence necessary for laws to be implemented and accepted.

So today's hearing is as much about looking at the processes and finding ways to make them even better in the future than what they are today. When there are shortcomings identified, then we should work for both points of view to make

it better than what it was in the past. I think that works to the benefit of both sides, when you can look at it and identify what is fact and what is a supposition or a proposition.

So from my perspective today you have been very helpful, and I want to thank all of the members of the witnesses here, all of the witnesses that have come in today and helped us in our process as well.

And I want to thank Senator Markey for his participation. It would be great to see some more members here as well. I understand that there are other conflicts as well.

Senator Markey, do you have any closing thoughts?

Senator Markey. Thank you, Mr. Chairman, very much. I ask unanimous consent to include in the record this explanation of the social cost of carbon from the New York University School of Law, which shows that the social cost of carbon uses a 3 percent discount rate, which Mr. Batkins said was the preferred rate of OMB.

Senator Rounds. Without objection.

Senator Markey. Thank you.

[The referenced information follows:]

Senator Markey. I would also like to say that historically this area doesn't really factor in the weight of innovation in the technology sector. The industry itself tends to be very, very pessimistic about what they can do; that is, the existing generation of executives just doesn't think they can do it. So that is what they testify to.

For example, back in 2001, 2003, 2005 I kept making the same amendment on the Floor of the House of Representatives, saying that the auto industry should average 35 miles per gallon by the year 2020 with their vehicles. The industry said we can't do that, you will bankrupt us; we can't do that, the technology just isn't there. So finally, in 2007, my law passed over in the House of Representatives that said 35 miles per gallon by the year 2020.

Then the industry basically suffered a tremendous collapse in 2008 and 2009. They dropped all the way down to just 9 million vehicles which they sold in the United States. Nine million is a very low number. And President Obama then promulgated the rules, saying they had to meet this much higher standard.

Well, this is unbelievable. They are not going to have 35 miles per gallon by the year 2020; they are going to have pretty close to 35 miles per gallon by 2016. So the industry dramatically underestimated how quickly they could move. They

said they couldn't even meet that deadline of 2018, 2019, 2020. They are meeting it in 2016.

Moreover, here is the big news: they are selling 16 million vehicles this year, these newer, more efficient vehicles out there that the public loves because they are saving money on gasoline and, by the way, sending up less pollution into the air; less carbon dioxide, less soot, less smog. It is just a completely win-win-win-win situation. But it does reflect how conservative these companies are.

The utilities are the same way. The chairman of the full committee made reference to the 1990 Clean Air Act and how much more quickly the technology moved and how much greater the benefits were.

So a lot of this kind of reflects, to a certain extent, the conservative view, which is understandable, of CEOs of companies in terms of what can happen after they are the CEOs of the company. That is just the way it is. But the truth is another generation taking another view of the same issues, bringing in perhaps younger technologists, younger scientists who have a more innovative spirit invariably, invariably results in dramatically faster implementation of new technologies and dramatically higher benefits that flow from the reduction in pollution that goes up into the atmosphere.

So that has been my observation over my career, while also

stipulating that I understand that motivation of the existing group of CEOs, but they are almost always wrong about the future, as right as they might be about the present. But the future has always been, from my perspective, a very elusive thing for the existing CEOs to grasp, especially if they have been on the same job for a prolonged period of time. They almost have a stake in the status quo and their vision being validated, because they don't have to worry about the future.

So I thank you, Mr. Chairman, and I yield back the balance.

Senator Rounds. Thank you.

Senator Inhofe. The balance of what?

[Laughter.]

Senator Rounds. The chair is going to take prerogative on this and allow the chairman of the full committee to make a comment before we close.

Senator Inhofe. Well, no, I learned a long time ago, and this surprises a lot of people. I used to say it and it really surprised them, that Barbara Boxer and I are good friends. This guy and I are good friends, and we have the kind of relationship that is a very honest relationship. He has every right to be wrong.

And I really believe that when you look at the overregulation, the direct relationship between overregulation and jobs that are lost and the cost of the economy, we have all

those figures, we have used them. You mentioned Utility MACT. Look at the number of people who have lost their jobs in anticipation of what would happen.

So, anyway, we have a nice relationship and we will continue this, and that is one of the most significant things about this committee, I think. Anyhow, I will yield back.

Senator Rounds. Thank you.

Once again, I would just like to take this opportunity to thank our witnesses for the time to be with us today. I would also like to thank my colleagues who attended this hearing for their thoughts and their questions.

The record for this meeting will be open for two weeks, which brings us to Wednesday, November 4th. With that, this hearing is adjourned. Thank you.

[Whereupon, at 11:18 a.m. the committee was adjourned.]