

**OVERSIGHT HEARING: EPA'S PROPOSED
CARBON POLLUTION STANDARDS
FOR EXISTING POWER PLANTS**

HEARING
BEFORE THE
COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

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JULY 23, 2014
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ONE HUNDRED THIRTEENTH CONGRESS
SECOND SESSION

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EPA'S PROPOSED CARBON POLLUTION STANDARDS FOR EXISTING POWER PLANTS

WEDNESDAY, JULY 23, 2014

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The full committee met, pursuant to notice, at 9:30 a.m. in room 406, Dirksen Senate Building, Hon. Barbara Boxer (chairman of the full committee) presiding.

Present: Senators Boxer, Carper, Cardin, Sanders, Whitehouse, Merkley, Gillibrand, Markey, Vitter, Inhofe, Barrasso, Sessions, Wicker, Fischer.

OPENING STATEMENT OF THE HON. BARBARA BOXER, U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator BOXER. Good morning, everybody. This oversight hearing will examine the critically important steps that the Obama administration is taking to address climate change by reducing carbon pollution. Today we are focused on the President's new proposal to reduce dangerous carbon pollution from the biggest source, power plants.

Just as last week when I welcomed the miners, it is my pleasure to welcome the Moms Clean Air Force. We are glad to see you here with the kids in tow.

Power plants account for nearly 40 percent of all carbon pollution released into the air. Currently there are no limits on the amount of carbon pollution power plants can release into our air. The President's plan, in my view, is a win-win for the American people because by addressing climate change through carbon pollution reduction, we can cut many types of air pollutants that also threaten human health.

Climate change and rising temperatures will lead to increased ground level ozone and smog which could worsen respiratory illnesses like asthma, increase air pollutants from wildfires and more heat-related and flood-related deaths.

When the President announced his power plant proposal at the Children's National Medical Center in Washington, he visited with young asthma patients to highlight the health impacts of air pollution and to underscore how important addressing dangerous carbon pollution is to our children's health. This proposal would play a vital role in protecting public health and will save thousands of lives. It will avoid up to 3,700 cases of bronchitis in children, 150,000 asthma attacks, 3,300 heart attacks, 6,600 premature deaths and 490,000 missed days at school and work.

I often say, if people can't breathe, they can't go to work or school. More than 9 percent of American children are already living with asthma, and it is the third leading cause of hospitalizations for children. So we all benefit from having clean air to breathe that literally saves lives. We need to take action now to protect families and communities from the mounting impacts of climate change and dangerous carbon pollution.

A recent congressionally required national climate assessment report tells us we could see a 10 degree Fahrenheit rise in temperatures if we don't act to limit dangerous pollution now. The President's new proposal will not only protect public health and save lives, it will enable America to lead the way to avert the most calamitous impacts of climate change, such as sea level rise, dangerous heat waves and economic disruption. We must safeguard our children, our grandchildren and future generations. As the President stated, "We have a moral obligation to leave our children a planet that is not irrevocably polluted or damaged."

The Obama administration gets it, and so do the American people. A recent Washington Post ABC poll, a bipartisan majority of the American people want Federal limits on carbon pollution. Approximately 70 percent say the Federal Government should require limits to carbon pollution from existing power plants. Seventy percent. And 70 percent support requiring States to limit the amount of carbon pollution within their borders.

Just last month the committee heard from four former EPA administrators who served under Republican Presidents, from Richard Nixon to George W. Bush, and they all agreed that climate change requires action now, and it should not be a partisan issue. The President's plan relies on the authorities under the Clean Air Act, which was created with a bipartisan consensus. In 1970, the Clean Air Act passed with a by a vote of 73 to zero in the Senate, and in the House, 375 to one. I don't know who that one was. And it was signed into law by President Nixon.

In 1990, the revisions to the Clean Air Act passed the Senate by 89 to 11, and the House by 401 to 21, and was signed into law by President George Herbert Walker Bush. The Clean Air Act has a proven track record of success. Since 1970, emissions of pollutants have dropped 72 percent, while the U.S. GDP has grown by 219 percent and total private sector jobs have increased by 101 percent. So while pollutants have dropped by 72 percent since 1970, private sector jobs have increased by 101 percent and the GDP increased by 219 percent.

So for all this fear mongering we hear from my friends on the other side about job losses, disproven every time. And if you take their quotes, they match up with the quotes that we heard both in 1970 when Nixon signed it, and then again when George Herbert Walker Bush signed it.

The President's proposal, I believe, will create thousands of jobs, while ensuring big polluters reduce their dangerous contributions to climate change.

I want to thank EPA Administrator Gina McCarthy for being with us today and I look forward to her testimony. So I am going to turn it over to Senator Vitter. I wanted to mention, we have a vote at 11. So we have two options. We can work as hard as we

can and then when it hits, 11:15, end, or we can take a pause and come back. Either way is good with me. So we will see, Administrator, where we are at that time.

Senator VITTER.

**OPENING STATEMENT OF THE HON. DAVID VITTER,
U.S. SENATOR FROM THE STATE OF LOUISIANA**

Senator VITTER. Thank you, Chairman Boxer, for convening today's hearing. I look forward to hearing from Administrator McCarthy on EPA's proposed existing source rule. It is really a truly unprecedented, outside the fence set of regulations that will have major negative impacts on our Nation's electricity system. I hope we talk about this very directly.

EPA's proposal does a number of things. But fundamentally, it hijacks that electricity system all in the name of flexibility. In reality, EPA usurps the role of State governments and public utility commissions as well as FERC, DOE and other Federal agencies that do have the authority over and expertise in electricity generation issues.

Unfortunately for EPA, electricity is not directly under its jurisdiction. Changing dispatch rules would require the most expensive power to be delivered first. The mandating efficiency and use of renewables are examples of interstate generation, transmission and distribution matters reserved to the States by the Federal Power Act.

Moreover, EPA attempts to dump the politically unpopular decisionmaking of having to pick winners and losers on the State regulators and legislatures. EPA's proposed rule seeks to turn States into either hostages or unwilling accomplices in its effort to impoverish families and businesses and communities.

In its existing source proposal, EPA goes beyond the plain reading of the Clean Air Act Section 111, directing States to achieve questionable emission reduction targets from a limited menu of economically damaging and legally questionable options. As I mentioned before, electricity prices in the Regional Greenhouse Gas Initiatives States and California are 45 percent higher than in my home State of Louisiana. And yet 56 percent of Louisiana families already at their lower Louisiana rate spend an average of 21 percent of their after-tax income on energy. They simply can't afford the higher electricity bills that will inevitably result from this rule.

EPA is also setting up States to fail, our local economies to fail, to deliver on the President's promise that electricity prices will necessarily skyrocket, all for virtually immeasurable climate benefits. This rule is all pain and no gain, therefore, and we need to look to our friends in Australia, for instance, who just last week repealed their carbon tax in recognition of this sort of lesson.

It is also noteworthy that EPA's blueprint is fundamentally similar to NRDCs, and it drives States to implement renewable portfolio standards and to replace fossil fuel, whether they like it or not. In States like Louisiana where wind and solar are not feasible or not at all practical, we are supposed to divert economically valuable timber into fuel for electricity generation. That is a very expensive feedstock compared to, say, coal or natural gas.

In defense of attacks by the New York Times and others, the Administrator also readily admits that her agency must revisit nuclear energy, since right now it encourages the closure of nuclear plants. So basically EPA is insisting that States ration electricity and limit consumer choice, especially if that choice involves using more electricity.

As 40 of my Republican Senate colleagues and I have stated in our June 3d letter, EPA's proposed rule will increase costs to families, schools, hospitals and businesses and in doing so, as always, it will hit the poor, the elderly, those on fixed incomes the hardest. In reality, it is a Federal takeover of our American electricity system. I for one am not at all comfortable for this EPA takeover, this dramatic expansion of EPA's role and authority. Neither are the people of Louisiana.

So I look forward to this discussion. It is very, very important. There are a lot of important stakes on the line.

Thank you, Madam Chair.

Senator BOXER. Thank you, Senator Vitter.

According to arrival, we will go next to Senator Whitehouse, followed by Senator Wicker.

**OPENING STATEMENT OF THE HON. SHELDON WHITEHOUSE,
U.S. SENATOR FROM THE STATE OF RHODE ISLAND**

Senator WHITEHOUSE. Thank you, Chairman Boxer, and Ranking Member Vitter, for hosting this important hearing, and Administrator McCarthy, thank you for being here and for your continuing leadership on this vital issue.

Obviously my State has a very different point of view than that expressed by the Ranking Member. We are on the losing end of carbon pollution in a lot of respects and we urge you on.

EPA's mission to protect human health and the environment is one of the most fundamental and popular responsibilities of the Federal Government. There is no greater environmental threat today than climate change. EPA has a duty to respond but it also has a mandate to respond.

EPA took a critical step forward in this fight when it exercised its existing Clean Air Act authority, as established by Congress, and as affirmed by the Supreme Court, to propose carbon pollution standards for existing power plants. That proposal was based on unprecedented public engagement, more than 300 public meetings with stakeholders of all kinds and across the political spectrum.

EPA's plan puts States in the driver's seat to come up with their own best plans to meet State-specific targets. States and power companies have a wide variety of options to cut carbon pollution, like boosting renewable energy, establishing energy savings targets, investing in efficiency, or joining one of the existing cap and trade programs, like our RGGI program in New England.

States can develop plans that create jobs, plan that cut electricity costs by boosting efficiency, plans that achieve major pollution reductions. As proposed, the rule will reduce carbon pollution while providing as much as \$93 billion in public benefit; \$93 billion in public benefit per year by 2030.

A recent Washington Post ABC news poll found that 70 percent of other public supports Federal standards to limit carbon pollu-

tion. Last month the Wall Street Journal-NBC News also released a poll showing that two-thirds of Americans support President Obama's new carbon pollution standard. More than half say the U.S. should address climate change, even if it means higher electricity bills for them. But it won't, because efficiency can reduce your bill, even if the per unit cost can go up.

EPA's proposal is supported by major utilities, like National Grid, faith organizations like the U.S. Conference of Catholic Bishops, public health groups, like the American Lung Association. There is also support from nameplate American corporations, like Mars, Nike and Starbucks. I would like to ask unanimous consent to enter into the record a letter from more than 125 American companies expressing support for the standard.

Senator BOXER. Without objection, so ordered.

[The referenced information follows:]



June 2, 2014

President Barack Obama
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

RE: Business Support for Proposed Carbon Pollution Standard for Existing Power Plants

Dear President Obama,

As businesses concerned about the immediate and long-term implications of climate change, we, the undersigned strongly support the principles behind the draft Carbon Pollution Standard for existing power plants released today. The Environmental Protection Agency's (EPA) proposed Carbon Pollution Standard for existing power plants represents a critical step in moving our country towards a clean energy economy.

Our support is firmly grounded in economic reality. We know that tackling climate change is one of America's greatest economic opportunities of the 21st century and we applaud the EPA for taking steps to help the country seize that opportunity.

Our businesses represent many different sectors of the economy and we recognize the importance of flexibility in choosing a path that is most effective and efficient in meeting the goals we have each set within our respective companies. That is why we are pleased to see that EPA's proposed rule allows individual states to utilize a number of flexible strategies to comply with the proposed standard.

We are especially pleased to see an approach that catalyzes energy efficiency and renewable energy deployment. Clean energy policies are good for our environment, the economy, and companies. Increasingly, businesses rely on renewable energy and energy efficiency solutions to improve corporate performance and cut costs. In 2012, a study by Ceres, Calvert Investments and the World Wildlife Fund revealed that 60 percent of the combined Fortune 100 and Global 100 companies have set a renewable energy goal, a greenhouse gas reduction goal or both. In short, a majority of the world's largest companies are investing in clean energy and reducing emissions. Today's rules will help spur investment and provide the long-term certainty necessary for our businesses to thrive and to meet these goals.

The new standards will reinforce what leading companies already know: climate change poses real financial risks and substantial economic opportunities and we must act now. We applaud your

administration for its commitment to tackling climate change and we encourage your timely pursuit of the finalization and implementation of these standards.

Thank you for your leadership.

Sincerely,

The adidas Group	Portland, OR
Adventure Safety International	Sandy, UT
Akamai Technologies	Cambridge, MA
Amicus Green Building Center, LLC	Kensington, MD
Annie's, Inc.*	Berkeley, CA
Asean Corporation	Portland, OR
Aspen Skiing Company*	Aspen, CO
Auralites, Inc.	Fletcher, NC
Aveda*	Blaine, MN
Bates Apartments	Morrisonville, NY
Ben & Jerry's*	South Burlington, VT
Big Green Island Transportation	Vancouver, BC
Biosynthetic Technologies	Irvine, CA
Blessed Coffee	Takoma Park, MD
BlueGreen Consulting Group Inc.	Toronto, ON
Blue Moon Massage	Lubbock, TX
Boston Building Resources	Boston, MA
Broadside Bookshop, Inc.	Northampton, MA
Burton Snowboards*	Burlington, VT
Camelback Mountain Resort	Tannersville, PA
CDI Meters, Inc.	Woburn, MA
ChangeWorks of the Heartland	Columbus, OH
Chrysalis Farm	Viroqua, WI
Classic Communications	Foxboro, MA
Clean Agency	Los Angeles, CA
Clean Power Finance	San Francisco, CA
Clean Technology Partners	Bellevue, WA
ClearSky Reporting	Boulder, CO
Clif Bar & Company*	Emeryville, CA
Contempl8 T-Shirts	Minneapolis, MN
Convergence Energy LLC	Lake Geneva, WI
Crystal Mountain	Thompsonville, MI
Deer Valley Resort	Park City, UT
Detour Destinations	Bozeman, MT
Dignity Health	San Francisco, CA
Distance Learning Consulting	Lafayette, CA
Ecco Bella	West Orange, NJ
Eco-Products	Boulder, CO
Eileen Fisher*	Irvington, NY
EMC Corporation	Hopkinton, MA
Ethical Electric	Silver Spring, MD
Ethical Markets Media	St. Augustine, FL
Exact Solar	Yardley, PA
Four Twenty Seven LLC	Berkeley, CA

General Biomass Company	Evanston, IL
Global Perception Inc.	Columbia Heights, MN
GoLite	Boulder, CO
Great Green Editing	Lutz, FL
Green Alliance	Portsmouth, NH
Gypsy Divers, Inc.	Raleigh, NC
Hayes Law, PL	Orlando, FL
HOTLIPS Pizza	Portland, OR
Impact Infrastructure, LLC	New York, NY
Interdependent Web	Emporia, KS
JLL*	Chicago, IL
Jumpin Jay's Fish Cafe	Portsmouth, NH
K2 Sports	Seattle, WA
Klean Kanteen	Chico, CA
Kollar Design EcoCreative	San Francisco, CA
Lake Climate Group LLC	Minneapolis, MN
Levi Strauss & Co.*	San Francisco, CA
LightWave Solar	Nashville, TN
The Lion Company	Lexington, MA
Mal Warwick Donordigital	Berkeley, CA
Mars, Incorporated*	McLean, VA
Martha's Antiques and Collectibles	Cambridge, MA
Method	San Francisco, CA
Mightybytes	Chicago, IL
Mirador Community Store	Portland, OR
MOM's Organic Market	Rockville, MD
Mountain Rider's Alliance	Hope, AK
National Foundry Products, Inc.	Philadelphia, PA
New Belgium Brewing*	Fort Collins, CO
Nike*	Beaverton, OR
The North Face*	San Leandro, CA
Novelis Inc.	Atlanta, GA
Oaktree/Greenline	Cambridge, MA
Oasis Montana Inc.	Stevensville, MT
OmniStudio	Washington, DC
Outdoor Industry Association*	Boulder, CO
Parallax Branding	Encinitas, CA
Patagonia, Inc*	Ventura, CA
Powdr Corp	Park City, UT
Powell Energy and Solar	Moorestown, NJ
Practical Energy Solutions	West Chester, PA
PRÉ North America	Washington, DC
Prologic Technology Group	Tucson, AZ
Rainbow Solutions, Inc.	Medford, MA
The Refill Shoppe	Ventura, CA
ReSourcing Natural Solutions	Durham, NC
Reusable Solutions Group	Santa Cruz, CA
ROSH Energy LLC	Houston, TX
Resonate LLC	Berwyn, PA
Rune's Furniture	Worthington, MN
San Juan Coffee Company	Durango, CO

Saunders Hotel Group	Boston, MA
Seventh Generation Inc. *	Burlington, VT
Singlebrook Technology	Ithaca, NY
SolarCity	San Mateo, CA
SolarEnergyWorld	Elkridge, MD
The Spotted Door	Salt Lake City, UT
Squaw Valley	Squaw Valley, CA
Starbucks*	Seattle, WA
Steve Kay Photo	Placencia, CA
Stonyfield Farm*	Londonderry, NH
StraightUp Solar	St. Louis, MO
StreetLife, LLC	Tusla, OK
Sugarbush Resort	Warren, VT
Sungevity	Oakland, CA
SunPower	San Jose, CA
Sunsense Solar	Carbondale, CO
Sustainable Concepts Studio	El Cerrito, CA
Sustainable Enterprise Conference	Forestville, CA
Swan Creek Energy LLC	Trenton, NJ
Symantec Corporation*	Mountain View, CA
Tel-Affinity Corporation	Needham, MA
The Added Edge	Glen Ellen, CA
Thule Inc.	Seymour, CT
TwentyTwo Designs	Driggs, ID
Underground	San Francisco, CA
Unilever	Englewood Cliffs, NJ
Venner Consulting	Lakewood, CO
Village Bakery and Café	Athens, OH
The Village Builders, LLC	Tusla, OK
VF Corporation*	Greensboro, NC
WeNeedaVacation.com	Wellesley, MA
Worthen Industries	Nashua, NH
Zaurie Zimmerman Associates, Inc.	Lexington, MA

cc:
Gina McCarthy, EPA Administrator
Senate Majority Leader Harry Reid
Senate Minority Leader Mitch McConnell
Speaker of the House John Boehner
House Minority Leader Nancy Pelosi

*Indicates BICEP members

I just want to mention, could you freeze the clock, please? If there are babies who are talking, it is important that you consider that we have an overflow room at G50. Because it is kind of hard to hear over that wonderful sound that we are hearing from the back. Your call, but we do have a room, G50.

Go ahead.

Senator WHITEHOUSE. Thank you, Madam Chair.

We had four former Republican EPA Administrators to testify before our Subcommittee on Clean Air and Nuclear Safety last month. They agreed, all four, that EPA's rule is a reasonable way to reduce carbon pollution and that industry has a history of overstating the compliance costs of environmental regulations. The benefits of the Clean Air Act, according to a 2011 EPA assessment, will outweigh its costs by a ratio of 30 to one, \$30 of value in the lives of regular Americans for every \$1 that polluters had to pay in cleanup costs. That is a good deal for America.

Administrator McCarthy, EPA's carbon pollution standards will lead to tremendous economic, environmental and health benefits for Americans. Do not be deterred by the polluters and their Republican allies in Congress who attack the proposal. They are fighting to protect the present status quo, which is polluters polluting at will and profiting at public expense. And do not worry, you are way more popular than they are, and the American people have far more confidence in you.

States are already achieving greater energy efficiency in renewable use than assumed in the proposed standards. Factor those into the standards, raise the bar. Develop carbon pollution standards for other major sources, like cement kilns and refineries.

Administrator McCarthy, the American people are behind you and counting on EPA to stand strong against the polluters. Stand up for the American people and go even further as you develop the final power plant standards in the months ahead. History will judge your efforts favorably.

Thank you very much.

Senator BOXER. Thank you, Senator.

We turn to Senator Wicker.

**OPENING STATEMENT OF THE HON. ROGER WICKER,
U.S. SENATOR FROM THE STATE OF ARKANSAS**

Senator WICKER. Thank you, Madam Chair. This morning we have an opportunity to discuss the serious implications of the Administration's unilateral move to execute its oppressive climate agenda.

Some of my friends on the other side continue to speak of carbon pollution, which suggests to some people that they are talking about particulate emissions. Of course, we know that what is being talked about with this proposed rule is carbon dioxide emissions from existing power plants. These regulations regarding CO₂ could negatively impact every single American.

The President seems determined to wage an all-out war on coal, launching costly regulations that would have little effect on changing the climate. Over the past 10 years, global coal consumption has soared by 65 percent. During the same period, U.S. coal exports have skyrocketed by more than 200 percent. Coal is burned

to provide 40 percent of the world's electricity needs in a reliable and economical way.

So although the coal consumption has soared, global average temperatures have stagnated over the past 17 years. This is a fact worth repeating. There has been no rise in global average temperatures over the past 17 years. Regardless, the Administration continues to defend its heavy-handed climate regulations with assertions that global average temperatures are on the rise.

The regulation we are here to discuss today is EPA's most blatant over-reach thus far. Under the guise of the Clean Air Act, the agency has proposed to mandate entities that are far outside its regulatory authority. The rule does not simply attempt to reduce emissions from existing plants. For the first time, EPA has gone beyond power plants with a regulation that reaches up to and including the power meter.

EPA is relying on the talking points that its proposed rule is flexible and allows States to create their own plans. I know this will be mentioned today. But this is fiction when it comes to many States. The rule is a regulatory noose for electricity providers and users in my State of Mississippi. In fact, in States like Mississippi, we are being punished by EPA for having a diversified portfolio of electrical generation. One hundred percent of Mississippi's current coal production will be forced to close down under this rule.

In place of coal, EPA suggests an increase in the use of renewable energy resources, an increase by more than 250 percent of renewable energy resources. Yet EPA's own technical support documents show zero potential for this type of renewable energy resource in Mississippi. What good is flexibility if there is no chance of flexibility?

Low cost and reliable electricity is at the core of economic growth. Many parts of the Country have been experiencing a manufacturing renaissance in part due to the great success of American energy innovation and the shale revolution. Unfortunately, EPA's rules do not account for future economic development and could actually thwart new growth. The so-called flexible regulation would mandate that States put CO2 emissions above all else.

If the proposed rules move forward, and I hope they do not, our economy would be put at an economic disadvantage. Utilities and States will be handcuffed by EPA's mandate, because they have to rely on uneconomical resources to power America's homes and businesses, increasing the costs for everyone. The consequences of the Administration's proposed rule would be disastrous for our economy, and again, would have minuscule impact on the environment.

In summary, my friends, the proposed rule is a breathtaking regulatory over-reach. It is a job-killer; it is based on questionable science; it is of dubious legality under the Clean Air Act. It amounts to an end run against Congress. It is inflexible. It will have no effect on the climate and is therefore pointless. And it is punitive, to name a few.

Thank you, Madam Chair.

Senator BOXER. But outside of that, you love it.

[Laughter.]

Senator BOXER. I know, I am just kidding. That was very effective and I was just trying to lighten up the atmosphere.

Senator Sanders.

**OPENING STATEMENT OF THE HON. BERNARD SANDERS,
U.S. SENATOR FROM THE STATE OF VERMONT**

Senator SANDERS. So you are leaning yes, is that right, Roger?
[Laughter.]

Senator SANDERS. Administrator McCarthy, thanks very much for being here, and thank you very much for the work you are doing.

We are in a remarkable moment in American history and in fact, in world history. And that is that for the first time, to the best of my knowledge, we have a major political party which by and large is rejecting what the scientific community is saying. Now, we can disagree about funding for education or health care, all that stuff. But if we cannot accept what the overwhelming majority of scientists are taking, and there is no more debate, the overwhelming majority of scientists are saying, A, climate change is real, climate change is caused by human activity, climate change is already causing devastating problems in the United State and around the world. And if we do not get our act together by significantly reducing carbon and methane emissions, that situation will only get worse.

That is not really a debate any more. And that we have a major political party that is rejecting that is extremely frightening.

Now, the evidence is overwhelming. According to the U.S. National Climate Assessment released in May, the average global temperature has increased by more than 1 and a half degrees Fahrenheit between 1880 and 2012. And temperatures in my State of Vermont and in New England have increased at least 2 and a half degrees Fahrenheit just in the last 30 years. By 2100 New England could be as much as 10 degrees hotter.

That is extraordinary. The debate that we should be having, and it would be an important debate, because nobody has all the answers, is how do you deal with this crisis? How do we work with countries around the world to reduce carbon, to transform our energy system? How do you do it? That is tough stuff. Nobody has any magical answer.

But that should be the debate. The idea that we are still debating whether or not this is a real issue when the scientific community tells us, this the planetary crisis of our time, is extremely distressing. Planetary warming is causing sea levels to rise. NOAA reported that global average sea level has increased 8 inches since 1880. Several locations along the east coast and the Gulf of Mexico have experienced more 8 inches of local sea level rise in only the past 50 years.

What we are talking about if we do not get our act together is major cities in the United States and countries around the world, parts of countries around the world being underwater. Being underwater. As a result of rising sea levels and increasingly intense storms, catastrophic storm surges have been rising as well.

People talk about financial issues. I will remind my colleagues that Hurricane Sandy cost this government alone over \$60 billion. And all over the world, all over the world, there are projections that we will be spending trillions of dollars, trillions of dollars, in

order to deal with rising sea levels, extreme weather disturbances and other manifestations of climate change.

I would remind my colleagues that in a certain sense, this debate that is taking place today is very similar to a debate that took place 50 or 60 years ago right here in Congress. And that is, we had tobacco industry lobbyists coming in here and heads of the tobacco industry saying, tobacco causing cancer? Oh, no, that can't be the case. And they brought doctors in here, guys who were smoking Kools and putting ads on television. And they were spending huge amounts of money trying to convince the American people that tobacco had nothing to do with cancer, emphysema and other serious illnesses.

Finally, the truth won out. And the truth will win out on this debate as well. Our job is to transform our energy system, work with countries around the world to reduce carbon and to help save the planet so these young people will have a habitable nation and a habitable world in the years to come.

Senator BOXER. Thank you, Senator.

Senator Fischer, followed by Senator Cardin, Senator Inhofe and then Senator Barrasso.

**OPENING STATEMENT OF THE HON. DEB FISCHER,
U.S. SENATOR FROM THE STATE OF NEBRASKA**

Senator FISCHER. Chairman Boxer and Ranking Member Vitter, thank you so much for holding the hearing today. I want to welcome Administrator McCarthy. It is always a pleasure to see you. Thank you for being here today.

We all share in the goal of cleaner air and can be proud of the tremendous improvements we have made in air quality over the past several decades. Air pollution has decreased, even as our population and the number of vehicles on the roads have increased, and even as our economy has growth.

In Nebraska, our public power utilities have made significant investments in coal-generated facilities in order to provide an even cleaner source of that low-cost energy in our State. While the regulatory actions at issue today are being pursued under the authority of the Clean Air Act, they are a significant departure from the true aims of the statute.

In an unprecedented use of the law, this Administration is seeking to reduce U.S. emissions of carbon dioxide, ostensibly to control global temperature changes. While the environmental benefits of capping carbon in America are negligible at best, the economic consequences are unquestionably devastating.

President Obama himself warned that electricity rates would necessarily skyrocket under a plan to control carbon. More than 80 percent of America's energy needs are met through carbon and many unconventional fuels.

Last year, coal and natural gas provided 66 percent of U.S. electricity generation. As EPA forces carbon reduction, it inflicts higher energy costs on American families and on businesses. While the economic pain would be felt throughout the Country, it is America's poorest families that will be hit the hardest. The median family spends about 5 cents out of every dollar on energy costs. Low-income families spend about 20 cents.

States like Nebraska that receive a majority of their electricity from coal-fired generation would also be disproportionately harmed under this proposal. The guidelines would force premature retirement of efficient, low-cost coal-fueled generation, lead to the potential loss of billions of dollars in investments made over the last decade to make coal plant cleaner, and require construction of higher cost replacement generation, and would increase natural gas prices.

Also troubling is the EPA-set emission guidelines that are not achievable at the affected source, the electricity-generating unit. Energy efficiency in a renewable portfolio mandates should not come through regulatory fiat. While I do not have enough time to list all the concerns raised by this proposal, you know that I believe there are many.

The issues are complex and the impacts are far-reaching. While I appreciate the 120-day comment period that was granted for public comment on this rule, the challenge presented to the States and other stakeholders to analyze and assess the enormous range of issues that are posed is beyond expectations. The level of complexity of the proposal, the volume of technical documents that are released, the amount of coordination required and the magnitude of energy impacts of the rule, I believe, warrant a 60-day extension of that public comment period. I hope to visit with you about that.

I am pleased that we are spending time today examining some of the concerns raised by the proposal. This is an important discussion, this is an important debate. I look forward to today's dialog. Thank you.

Senator BOXER. Thank you, Senator Fischer.
Senator Cardin.

**OPENING STATEMENT OF THE HON. BENJAMIN CARDIN,
U.S. SENATOR FROM THE STATE OF MARYLAND**

Senator CARDIN. Thank you, Madam Chair.

First, let me thank Administrator Gina McCarthy for being here, but more importantly, being willing to take on the responsibilities of the Environmental Protection Agency at this critical moment in the history of our Country. It is not an easy task, and you were willing to step forward, knowing full well the challenges that you would confront. I want to thank you for being willing to do this.

The Chairman already mentioned that there are children at the hearing. I think that is wonderful, because it is their future that we are talking about. It is the environment that they will be living in that is very much impacted by what we do here and what the Administration is doing.

The impact of climate change in Maryland is well understood. The people in my State recognize the risks that are involved as a result of climate change. Seventy percent of the population of Maryland lives in coastal areas. And they are at risk. Property owners are at risk of losing their properties, and they know the financial impact that is involved. The people of Maryland, the iconic shorelines that we have, that is our way of life, that is at risk.

The economics of my State are at risk, from the poultry industry that depends upon reasonable price for corn in the cost of pro-

ducing the poultry know that the weather conditions have made corn more expensive, therefore, their business more difficult.

The watermen understand the loss of our crab population due to the warming of the waters and loss of sea grasses. The seafood industry also understands the warmer waters affect all the produce coming out of the Chesapeake Bay. The Port of Baltimore is one of the economic hearts of our State. And the climate change, rising sea levels, make it more difficult to run the Port of Baltimore economically. It has an impact on our economy.

And I could go on and on about the impact, on our military installations, from the Aberdeen proving grounds to Pax River in the southern part of our State, to in our capitol, the Naval Academy. All very much impacted by climate change. As my colleagues have pointed out, the science is indisputable that our activities here in our communities are affecting climate change.

Congress should have acted, Madam Chair, we tried, we should have provided the framework for the way that we deal with climate change. We tried, but we were stopped. We wanted to use market-based solutions to make it clear and make it more available for private companies to invest. But no, we were stopped in those efforts. So the Administration is doing what they are required to do. EPA has the authority and the responsibility to act. And three Supreme Court decisions have made it clear that you are acting within that authority.

Let me quote from the case that the Chair mentioned, Justice Scalia, what he said just very recently: "It bears mention that EPA is getting almost everything it wanted in this case. It sought to regulate sources that it said were responsible for 86 percent of all greenhouse gas emissions from statutory source nationwide. Under our holding, EPA will be able to regulate source responsible for 83 percent of those emissions."

And then, the Clean Air Act clearly gives you the authority to establish baseline performance standards for power plants, which in this case or this rule are talking about achieving a 30 percent net reduction in carbon pollution from power plants using 2005 as a baseline by 2030. You have the authority, you have the responsibility, you are acting.

And thank you for the flexibility that you are providing. You are putting the States in charge. You are giving them the power they need to do what is right for their community. We can work in regional, among different States. That is what you have allowed, and I thank you for that proposed rule.

Maryland energy companies have acted. Constellation and Exelon have taken on this challenge, have done it in a cost-effective way and have created jobs in the meantime.

Madam Chair, I have heard that it doesn't take another Cuyahoga River to catch on fire, which we needed before we enacted the Clean Air Act, or for toxic air to be breathed by the people of Los Angeles before we enacted the Clean Air Act. I hope it doesn't take the loss of Smith Island in Maryland or the washing away of the Everglades or dust bowls to become the regular in our breadbasket in this Country before we act on this critical issue.

I thank the Administration for taking action. I hope Congress will take action to be your partner in making the reality of Amer-

ica's leadership on global climate change when it is desperately needed.

Senator BOXER. Thank you, Senator.
Senator Inhofe.

**OPENING STATEMENT OF THE HON. JAMES INHOFE,
U.S. SENATOR FROM THE STATE OF OKLAHOMA**

Senator INHOFE. Thank you, Madam Chairman, and Administrator McCarthy, thank you for being here. It is very nice to see you.

There are so many problems that have been pointed out already by my colleagues with the existing source carbon renewal that it is hard to know where to begin. First, there is the issue of the impossible efficiency requirements that the rule would place on power plants. Then there is the question of what should happen with the standard and the MATS-compliant coal plants and how they are supposed to achieve reductions without going belly up.

Then there are bigger questions like how EPA plans to enforce the rule and to what extent the agency will be allowed to tweak the State's plan if it is not making the progress that it needs to be made during the decade-long compliance period.

These are very complex questions. And there are hundreds more. Many smart people have been reading this rule for the last 2 months, and they are at a loss for what this will actually look like. In other words, it appears that EPA is urging the Nation to trust them as they take over the entire electricity market in the black-box confines of the comment period.

With that said, there are a few things that are crystal clear. First of all, we know that the rule will cause electricity prices to go up. We know this from the EPA's own logic. EPA's rule set out to save the 6 percent of nuclear generators that have become economically marginal. Now, how will the EPA do this? By increasing electricity prices. In the absence of regulatory relief from the NRC, and the EPA, which is not happening, the only way to keep a marginal nuclear plant in business is for it to be paid more for its power. And the only way the EPA can do that is by pushing the prices up.

The second thing that we know is that this rule will end up with the United States looking like Germany where the poor and the business community alike are reeling under the high electricity prices. Their prices are now three times what they are in the United States.

And this is something the Administration is doing even though the American people, and they really don't care about this, talk about all the people that are joining in and saying that global warming is happening, the science is overwhelming, they say that because there is nothing else they can say. We have already had this before our U.S. Senate many times, and it has been resoundingly defeated by a larger margin each time it comes up. It has come up four times.

And that is the trend line that is there. We all understand that. We know that a recent Gallup poll showed that, I can remember back when global warming was our No. 1 or No. 2 concern. It is now 14, as of 2 weeks ago, 14 out of 15 concerns. According to the

Pew Research center, 53 percent of the Americans who believed global warming is happening, when asked the cause of it, either don't believe there is enough evidence to blame man or believe that it is by natural variation.

This may explain why it has become difficult for Tom Steyer, the guy who is putting out \$50 million to put up campaigns to influence people to try to believe that, he has tried to resurrect the whole global warming thing and tried to kill the Excel pipeline. He put his \$50 million up; he is going to raise the other \$50 million. According to Politico a couple of days ago, he has been able to raise only \$1.2 million from outside donors. So they are not coming to the party, either.

The third thing we know is that this rule will have essentially no impact on global temperatures, which is the very reason, because that is ultimately what the rule is supposed to do. According to one analysis, which was used as a model and developed by the EPA, the ESPS rule would reduce global temperature, this is using their analysis, by 0.02 degrees Celsius as is shown on this chart. It is hardly measurable with all the costs we are going to be involved in.

Monday night I had dinner with Senator Mathias Cormann, who happened to be here in the country from Australia. Senator Cormann is the guy who was leading the cause after he at one time supported the idea of taxing carbon, to repeal it. So they have repealed it in Australia.

Stop and think about it, it is China and Russia and other states, even if you believe all this, they are the ones that are sitting back anxiously hoping that we will somehow tax carbon, so that they will be able to draw in our base.

The last thing, since I am running out of time here, I want to mention that there is a study that is floating around that says that this rule will enhance natural gas. You can get an argument that it would. But I think what they are forgetting to mention is that this is a war on fossil fuels. Natural gas is a fossil fuel. And as you can see up here, they would be next. The war on fossil fuels is going to come, natural gas right after coal.

So that is what is behind the whole thing. I appreciate your holding this hearing and we will see what happens.

Senator BOXER. Thanks, Senator.

Senator BARRASSO.

**OPENING STATEMENT OF THE HON. JOHN BARRASSO,
U.S. SENATOR FROM THE STATE OF WYOMING**

Senator BARRASSO. Thank you very much, Madam Chairman.

On July 6th of this year, the New York Times wrote a piece about the outsized role that the National Resources Defense Council, the NRDC, had in developing the EPA's new regulations to curb power plant emissions. The article focused on three key senior NRDC officials who the Times described as Washington's best-paid lobbyists, who developed the core of EPA's plan. Washington's best-paid lobbyists developed the core of EPA's plan.

The New York Times stated that on June 2d, President Obama proposed a new Environmental Protection Agency rule to curb power plant emissions that used as its blueprint the work of three

men and their team. The article says it was a remarkable victory for the Natural Resources Defense Council.

Now, for those outside the beltway, the NRDC is a \$120 million a year lobbying machine backed by Hollywood elites. It is absolutely shameful to me that the EPA, under the direction here of the Administrator, will allow this powerful group of lawyers and lobbyists to draft their regulations. But yet this same Administrator refuses to actually listen to the people whose lives and jobs will be severely impacted by these regulations drawn up by wealthy lawyers and lobbyists.

In fact, the Administrator refuses to listen to the thousands of Americans who will be impacted by this rule. The EPA Administrator has refused to go out and visit folks in coal country, whose lives the agency is upending. The EPA Administrator won't hold a public hearing in Wyoming, won't hold a public hearing in Kentucky. The EPA Administrator has literally gone out of her way and the EPA has gone out of its way to avoid hearing from unemployed families who have lost or will lose everything, their job, their home, their retirement savings, issues relating to their health, all because the EPA has decided to push a rule that was drafted behind closed doors by powerful, wealthy Washington lawyers and lobbyists at the NRDC.

Let's be clear. The NRDC is a wealthy, elite, powerful lobbying machine with more influence over decisionmaking in Washington than any ordinary American citizen. They have millions, which gives them access. The EPA has turned a deaf ear on those who don't.

It should come as no surprise that this is how the EPA's regulations for new and existing power plants were hatched. In fact, the Times article argues that the NRDC employed this very same tactic during the Bush administration to craft their comprehensive energy strategy. When the Bush energy strategy was released at the time, the NRDC issued the following statement about how it was crafted: "The conclusions of the Cheney Task Force are a product of an undemocratic process. When NRDC filed a Freedom of Information Act," the story continues, "NRDC filed a Freedom of Information Act request for documents identifying members of the task force and the calendars of task force members, the Department of Energy denied the request."

I would say this is quite a change of heart by this group of wealthy Washington lobbyists and lawyers. If I am wrong, then the NRDC and the EPA and its Administrator can provide and should provide all records and documents that are requested by members of this committee and my House colleagues on how these new regulations for coal-fired power plants were crafted. Because right now, it sure looks like the EPA let a trio of high-powered Washington lobbyists write their regulations for them.

If what the Times is reporting is what the EPA Administrator has called preposterous, then the EPA must comply with any committee and Freedom of Information Act requests for these documents. Comply with requests from our House colleagues, comply so that we can then know the truth.

If the answer is no, that you will not comply, or that there are more recordkeeping mishaps, broken hard drives, lost files, then we will know the truth about this agency as well.

Thank you, Madam Chairman, I look forward to the testimony. Senator BOXER. Thank you, Senator.

Now, here is where we stand, because we are trying to move on. We are going to accommodate the Senators who are here, so we are going to move to Senator Carper, Senator Sessions, and we will close with Senator Merkley. At that point, unless there is serious objection, we are going to move to Administrator McCarthy. And the colleagues that come later can have an extra minute to do a little bit of an opening, if that is OK with everybody.

So let's move forward, and we will go now to Senator Carper.

**OPENING STATEMENT OF THE HON. THOMAS CARPER,
U.S. SENATOR FROM THE STATE OF DELAWARE**

Senator CARPER. Thanks, Madam Chair. Administrator McCarthy, very nice to see you.

For many years, I served as either the ranking member or as the chair of the Subcommittee on Clean Air and Nuclear Safety. I remember in those days, I think George Voinovich was the chair at the time, we were meeting with a number of utility CEOs from around the Country. We were talking about multi-pollutant legislation, dealing with sulfur dioxide, nitrogen oxide, mercury, CO2.

And after about an hour-long meeting, this one utility CEO from some place down south, a southern State, I don't remember which one, kind of a curmudgeon-like guy, he said at the end of our hour-long conversation, all right, Senators, this is what you should do. This was with respect to multi-pollutant legislation. He said, you should tell us what the rules are going to be. You should give us a reasonable amount of time to implement those rules. Give us a little bit of flexibility and get out of the way. That is what he said.

Tell us what the rules are going to be. Give us a reasonable amount of flexibility, reasonable amount of time and get out of the way. That was 10 years ago.

Well, my hope and my belief is that EPA is actually not just saying, these are what the rules are going to be. They said, after talking to a lot of stakeholders, including utilities, including coal companies, including environmental groups, including State and local governments, EPA said, this is what we think the rules should be. In doing so, they basically put out a draft of what they think the rules should be. Asked for a lot of response, a lot of input from people around the Country.

And that is where we are. I think it great we are having this hearing, Madam Chair, great that the Administrator is here. But the way the system works here, EPA doesn't mandate what is going to happen. I hope they are getting input from all kinds of groups, including groups like NRDC. That would make sense. I hope they get input from utility companies. That would make sense. I hope they get input from the coal companies. That would make sense.

So I am glad you are here, glad we have an opportunity to hear what the Administration is proposing, and glad we are going to have an opportunity to provide input to them.

Delaware and some other States feel the impact of climate change that are already taking place to reduce our local power plant carbon emissions. Unfortunately, few States like us cannot tackle this issue alone. All States have to do their fair share if we are going to make an impact.

The Clean Power Act unites our Country in working to take on the largest source of carbon emissions together. I want to thank the Administrator, want to thank our President for their leadership and for moving forward with this rule.

Opponents to this rule are going to say that we have to choose between having a cleaner environment and a stronger economy. I have said a million times, that is a false choice. We can have both. And if we are smart, we will have both. In fact, we have done it time and time again.

We know that inaction on climate change only costs us money in the long run. Inaction can be devastating to our economy. In fact, the Government Accountability Office has already listed climate change as one of the biggest fiscal risks facing our Nation. They are not making this stuff up. It is. That is why I believe we need to move forward with the Clean Power Plan.

However, for such an important rule, we need EPA to get it right. We need to have a rule that reduces carbon emissions, protects public health and grows our economy, which is finally growing quite nicely. We need a rule that does not pick winners and losers between clean energy technologies. And we need a rule that is flexible and legally defensible so the States can meet their carbon targets.

I believe that EPA is trying to strike the right balance. God knows it isn't easy. Through unprecedented outreach and hearing from over 300 stakeholders nationwide, EPA has developed a proposal that builds on what States are already doing to reduce power plant carbon emissions. The EPA's proposal recognizes that what might work for Delaware may not work for California, may not work for Oklahoma or Alabama or Mississippi or Nebraska. But rather, your proposal allows each State the flexibility of finding the most cost-effective way to reduce their own emissions. As my father would say, God rest his soul, that sounds like common sense to me.

After working for more than a decade on legislative efforts to reduce carbon emissions from power plants, I applaud the EPA's decision to set carbon targets that are meaningful, flexible and feasible. I will close by saying I encourage the EPA to continue to listen to the stakeholders, listen to us and make adjustments as needed to ensure that we get this one right. It is important that we do.

I look forward to today's discussion and future discussions on this. Welcome and thank you.

Senator BOXER. Thank you, Senator.

Senator Sessions, followed by Senator Merkley, and then, Administrator, we are going to turn to you.

**OPENING STATEMENT OF THE HON. JEFF SESSIONS,
U.S. SENATOR FROM THE STATE OF ALABAMA**

Senator SESSIONS. Thank you, Madam Chair.

The American economy is important; I know you know that. We have a decline in median family wages in America since 2007 from \$55,000 to \$50,000. We have an employment rate among the working age population as low as the 1970's, it has been declining steadily. And the energy has been, a decline in the energy prices, one of the finest things that helped the American economy in recent years.

So lower cost energy clearly creates jobs, it creates wealth. And every \$10 a family has to pay for an electric bill or more for their gasoline bill does weaken the economy if it is for no benefit or little benefit. So we have to ask that. We can reach some agreement on a lot of these issues, Ms. McCarthy. I don't think there is any doubt about it. Things that are cost-effective, clean, efficiency programs, things that probably are done to make American healthier and a stronger economy. And there is common ground that we can have.

One of those common grounds I think is nuclear power. We need to consider that more.

Last month, in the *Utility Air Regulatory Group v. EPA*, the Supreme Court said this: "When an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, we typically treat its announcement with a measure of skepticism."

Well, we know that Congress has never voted explicitly to regulate CO₂. And would not vote today if given the opportunity. But through old statutes and interpretation you now as an unelected official are impacting the economy in extraordinary ways. And I just think we ought not to forget that.

CO₂ emission targets for Alabama are a reduction of 27 percent. But States like Arkansas and Georgia with 44 percent reductions are really hammered every harder. South Carolina with a 51 percent reduction, Tennessee with a 39 percent reduction. Those are huge economically impactful regulations that you are putting out that we don't get to vote on. The American people aren't given a voice in it.

So I want you to know we are concerned about the problem that you are concerned about, in trying to make this environment healthy and positive. But we have to ask, what is the real world impact on it? We know Germany is backing off and reconsidering some of its very green issues. Australia recently scrapped its carbon tax. So I think it is a matter that we need to concern ourselves with.

Additionally, I am worried about the nuclear industry. We only have a few plants that are going forward now. The Tennessee Valley Authority, which handles most of north Alabama and part of Mississippi and Tennessee, they are building a nuclear plant at Watts Bar. Under your regulations, they will spend billions of dollars to bring that plant online and will get no credit for it whatsoever. In fact, when their rule, the impact rule of reduction of emissions occurs, it will be even more burdensome from them than otherwise would be the case.

In fact, I think it is fair to say they are penalized for investing now to reduce carbon emissions through nuclear power. And they have done it already, they have reduced emissions, carbon emis-

sions by 17 percent since 2005, and are liable to achieve a 44 percent reduction by 2020. But they will be, I think, clearly unfairly impacted by the way you are calculating the nuclear power carbon free power generation that could occur.

Madam Chair, I will wrap up, and thank you for the opportunity to be here.

Senator BOXER. Senator, thank you very much.

Last but not least, Senator Merkley, and then we turn to the Administrator.

**OPENING STATEMENT OF THE HON. JEFF MERKLEY,
U.S. SENATOR FROM THE STATE OF OREGON**

Senator MERKLEY. Thank you, Administrator McCarthy, for coming and addressing the Clean Power Plan today.

There is no question that carbon dioxide is a terrible pollutant having profound impacts. We see it on the ground in Oregon in multitudinous ways. We see it in terms of the expansion of the bark beetle or pine beetle that is destroying vast swaths of our forests, because it is not cold enough in winter to kill them off. We see it in terms of our oyster industry that is having great difficulty with the reproduction of oysters because the water is 30 percent more acidic in the ocean than it was before the industrial revolution. We certainly see it in the Klamath Basin where the three worst ever droughts have occurred in less than a decade and a half.

Thus, carbon dioxide is waging an assault on our rural resources, on our fishing, on our farming, on our forests. It is absolutely right that under the Clean Air Act, we seek to control and reduce this pollutant having such vicious consequences across rural America.

So thank you for coming and addressing the details of the plan. I look forward to the commentary and I look forward to an understanding of how many jobs can be created by addressing non-carbon sources of power. It is clear that already in just the solar world, there are twice as many jobs as there are in the coal world, not counting other forms of renewable energy. But there is huge growth potential to power up living wage jobs across our Nation as we take on this vicious attack on rural America.

Thank you for your testimony today.

Senator BOXER. Thank you, Senator.

Administrator McCarthy, you have heard from 12 of us, six and six. And I really want to say to each colleague, I thought each of you made your points very well and to the point. So we turn to you, Administrator McCarthy.

**STATEMENT OF HON. GINA McCARTHY, ADMINISTRATOR,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Ms. McCARTHY. Thank you, Chairman Boxer, Ranking Member Vitter and members of the committee, for the opportunity to testify today on EPA's recently issued Clean Power Plant proposal.

Climate change is one of the greatest challenges of our time. It already threatens human health and welfare and the economy, and if left unchecked, it will have devastating impacts on the United States and on the planet.

The science is clear, the risks are clear, and the high costs of climate inaction are clear. We must act. That is why President

Obama laid out a climate action plan and why on June 2d I signed the proposed Clean Power Plan to cut carbon pollution, build a more resilient nation and lead the world in our global climate fight.

Power plants are the largest source of carbon dioxide emissions in the United States, accounting for roughly one-third of all domestic greenhouse gas emissions. While the United States has limits in place for levels of arsenic, mercury, sulfur dioxide, nitrogen oxide and particle pollution that power plants can emit, there are currently no national limits on carbon pollution levels.

EPA's proposed Clean Power Plan will cut hundreds of millions of tons of carbon pollution and hundreds of thousands of tons of other harmful pollutants from existing power plants. Together, these reductions will provide important health benefits to our most vulnerable citizens, including our children.

The Clean Power Plan is built on the advice and information that we drew out and listened to from States, cities, businesses, utilities and thousands of people about the actions they are already taking to reduce carbon dioxide emissions.

The plan aims to cut energy waste and leverage cleaner energy sources by doing two things. First, it uses a national framework to set achievable, State-specific goals to cut carbon pollution per megawatt hour of electricity generated. But second, it empowers States to chart their own customized path to meet those goals.

We know that coal and natural gas play a significant role in a diverse national energy mix. The plan builds on actions already underway to modernize aging plants, to increase efficiency and lower pollution. It paves a more certain path for conventional fuels and a clean energy economy.

The EPA stakeholder outreach and public engagement in preparation for this rulemaking was unprecedented. Starting last summer, we held 11 public listening sessions around the Country. We participated in hundreds of meetings with a broad range of stakeholders across the Country. And we talked with every State.

Now, the second phase of our public engagement has begun. We have already had dozens of calls and meetings with States and other stakeholders in the more formal public process. Both a public comment period that runs through October 16th, 2014, and public hearings next week in Atlanta, Denver, Pittsburgh and Washington, DC. will provide further opportunity for stakeholders and the general public to provide input.

Each State is different. So each State goal and each path can be different. The goals spring from smart and sensible opportunities that State and businesses are already taking advantage of right now. Under the proposal, the States have a flexible compliance path that allows them to design plans sensitive to their needs, including considering jobs and communities in a transitioning energy world. It also allows them 15 years from when the rule is final until compliance with the final target to consider and make the right investments, to ensure energy reliability and to avoid stranded assets.

All told, in 2030, when States meet their goals, our proposal will result in 30 percent less carbon pollution from the power sector across the U.S. in comparison with the 2005 levels. In addition, we will cut pollution that causes smog and soot by more than 25 per-

cent. The first year that these standards go into effect we will avoid up to 100,000 asthma attacks and 2,100 heart attacks. Those numbers just go up from there.

In 2030, the Clean Power Plan will deliver climate and health benefits of up to \$90 billion and for certain smog reduction alone, meaning for every dollar we invest, families will see \$7 in health benefits. And because energy efficiency is such a smart, cost-effective strategy, we predict that in 2030, average electricity bills for American families will be 8 percent cheaper.

This proposal sets targets at a reasonable schedule that can be achieved by every State using measures they choose themselves to suit their own needs. The EPA looks forward to discussion of the proposal over the next several months, and I look forward to your questions.

Thank you very much.

[The prepared statement of Ms. McCarthy follows:]

**Opening Statement of Gina McCarthy Administrator
U.S. Environmental Protection Agency
Hearing on EPA's Proposed Clean Power Plan
Committee on Environment and Public Works
U.S. Senate
July 23, 2014**

Chairman Boxer, Ranking Member Vitter, members of the committee: Thank you for the opportunity to testify today on EPA's recently issued Clean Power Plan proposal.

Climate change is one of the greatest challenges of our time. It already threatens human health and welfare and economic well-being, and if left unchecked, it will have devastating impacts on the United States and the planet.

The science is clear. The risks are clear. And the high costs of climate inaction are clear. We must act. That's why President Obama laid out a Climate Action Plan and why on June 21 signed the proposed Clean Power Plan—to cut carbon pollution, build a more resilient nation, and lead the world in our global climate fight.

Power plants are the largest source of carbon dioxide emissions in the United States, accounting for roughly one-third of all domestic greenhouse gas emissions. While the United States has limits in place for the level of arsenic, mercury, sulfur dioxide, nitrogen oxides, and particle pollution that power plants can emit, there are currently no national limits on carbon pollution levels.

EPA's proposed Clean Power plan will cut hundreds of millions of tons of carbon pollution and hundreds of thousands of tons of other harmful air pollutants from existing power plants. Together these reductions will provide important health benefits to our most vulnerable citizens, including our children.

The Clean Power Plan is a critical step forward. Our plan is built on advice and information from states, cities, businesses, utilities, and thousands of people about the actions they are already taking to reduce carbon dioxide emissions.

The Plan aims to cut energy waste and leverage cleaner energy sources by doing two things: First, it uses a national framework to set achievable state-specific goals to cut carbon pollution per megawatt hour of electricity generated. And second, it empowers the states to chart their own, customized path to meet their goals.

We know that coal and natural gas play a significant role in a diverse national energy mix. This Plan does not change that—it builds on action already underway to modernize aging plants, increase efficiency, and lower pollution, and paves a more certain path for conventional fuels in a clean energy economy.

The EPA's stakeholder outreach and public engagement in preparation for this rulemaking was unprecedented. Starting last summer, we held eleven public listening sessions around the country. We participated in hundreds of meetings with a broad range of stakeholders across the country, and talked with every state.

Now, the second phase of our public engagement has begun. We've already had dozens of calls and meetings with states and other stakeholders and the more formal public process – both a public comment period that runs through October 16, 2014, and public hearings next week in Atlanta, Denver, Pittsburgh, and Washington, DC– will provide further opportunity for stakeholders and the general public to provide input. These are not mere words: this is a proposal, and we want and need input from the public. That is why we have already engaged states, utilities, and other stakeholders to get their feedback.

To craft state goals, we looked at where states are today, and we followed where they're going. Each state is different, so each goal, and each path, can be different. The goals spring from smart and sensible opportunities that states and businesses are taking advantage of right now.

Under the proposal, the states have a flexible compliance path that allows them to design plans sensitive to *their* needs, including considering jobs and communities in a transitioning energy world. It also allows them enough time – fifteen years from when the rule is final until compliance with the final target – to consider and make the right investments, ensure reliability, and avoid “stranded assets.”

Our plan doesn't just give states more options—it gives entrepreneurs and investors more options, too, by unleashing the market forces that drive innovation and investment in cleaner power and low-carbon technologies.

All told, in 2030 when states meet their goals, our proposal will result in about 30 percent less carbon pollution from the power

sector across the U.S. when compared with 2005 levels – 730 million metric tons of carbon dioxide out of the air. In addition, we will cut pollution that causes smog and soot by more than 25 percent. The first year that these standards go into effect, we'll avoid up to 100,000 asthma attacks and 2,100 heart attacks—and those numbers go up from there.

In 2030, the Clean Power Plan will deliver climate and health benefits of up to \$90 billion dollars. And for soot and smog reductions alone, that means for every dollar we invest in the plan, families will see \$7 dollars in health benefits. And because energy efficiency is such a smart, cost-effective strategy, we predict that, in 2030, average electricity bills for American families will be 8 percent cheaper.

President Obama's Climate Action Plan provides a roadmap for federal action to meet the pressing challenge of a changing climate – promoting clean energy solutions that capitalize on American innovation and drive economic growth and providing a role for the full range of fuels, including coal and natural gas.

This proposal sets targets and a reasonable schedule that can be achieved by every state, using measures they choose themselves

to suit their own needs. The EPA looks forward to discussion of the proposal over the next several months, and I look forward to your questions. Thank you.

Senator BOXER. Thank you very much, Administrator.

I will start off. I am going to respond to a couple of my colleagues and then I am going to ask you a question about how the States' role is so important in your rule.

First of all, Senator Barrasso was quite eloquent in attacking the NRDC. So for those who don't know, the NRDC, this is their very, this is their goal. And see what you think of it. The goal is "to safeguard the natural systems on which all life depends." It sounds like a terrific goal to me. And further, the ideas that the NRDC had were actually released at a National Press Club event in 2012, their plan. And it is true that EPA borrowed from that, but good for them for putting out some really clever ideas. Because I think the notion of States taking the lead and the flexibility was very, very smart.

And I know that EPA has held public stakeholder sessions before the rule was even proposed. But we will hear more about that. I am sure there will be a lot of questions on who EPA discussed the rule with.

Then my friend Senator Wicker also very eloquently says, the President uses unilateral action. No, he doesn't. He is doing what he has to do. And I will quote from Christy Todd Whitman, who is a Republican and headed the EPA. She said this right here, "I have to begin by expressing my frustration with the discussion about whether or not the EPA has the legal authority to regulate carbon emissions. The issue has been settled," she says. EPA does have the authority, the law says so, the Supreme Court says so twice.

Well, I would add that since Christy Todd Whitman said that, the Supreme Court acted again, a third time in the Scalia opinion, upholding the authorities of the EPA. So I don't know why we have to fight about things that have been settled three times by the Supreme Court. It is interesting and it is always a pleasure to debate my colleagues on these things. But I think we should move on about that.

Now, my question is, the Clean Air Act states "that air pollution prevention and air pollution control at its source is the primary responsibility of States and local governments." How does EPA's proposed rule on controlling carbon pollution for existing power plants uphold this cooperative relationship between the Federal Government and State and local governments?

And adding to that, to be a little specific, as you note, California has been a global leader in reducing its carbon pollution, and its landmark climate change program is driving investments in clean energy, spurring new job growth and improving the State's air quality. And I want to make sure, under EPA's proposal, my State will be able to continue its climate change program and use the existing program as a key part of its State compliance plan. So if you could expound on the role of the States and also my State.

Ms. MCCARTHY. I would be happy to. First of all, let me indicate that there is tremendous flexibility in this rule. And it is because EPA listened to every stakeholder. And when we met, unprecedentedly, in our outreach efforts, and really they were historic, to reach out to States, to utilities, to stakeholders, yes, to the

environmental constituents as well, we heard from every one of them that it was important to have flexibility.

I also read the Clean Air Act, which said that the law that I am implementing looks at where States are today and it looks at what reasonable, practical efforts that they can undertake to reduce pollution moving forward. The flexibility in this rule is not just the fact that we had individual State standards, which respected where the energy system was in each one of those States, uniquely. But it also provided 15 years as our proposal to move forward. That doesn't even begin until 2015, in order to achieve these standards.

So we are talking about standards being achieved in 2030. So it is a tremendously long time line.

But every State gets to design their own compliance strategy. Every State gets to look at what they want for their own fuel diversity, what they want to invest in. The great thing about this proposal is it really is an investment opportunity. This is not about pollution control. It is about increased efficiency at our plants, no matter where you want to invest. It is about investments in renewables and clean energy. It is about investments in people's ability to lower their electricity bills by getting good, clean, efficient appliances, homes, rental units. This is an investment strategy that would really not just reduce carbon pollution, but will position the United States to continue to grow economically in every State, based on their own designs.

But it also will position us tremendously internationally.

Senator BOXER. So the State can continue its effort and continue for what it is doing.

Ms. MCCARTHY. Well, that is the last flexibility I should mention, which is, we opened it up entirely to individual State plans or to regional plans they want to do. If California wants to continue with its very successful cap and trade program, it can do so. But in the end, what we are looking for are reductions at those fossil fuel facilities. But use your own imagination on how to get here. We are doing exactly what everybody has asked EPA to do for a long time, which is, you set the standard based on science, we will get there in the cheapest, most cost effective way that we can. And we are actually telling States to go do that.

Senator BOXER. Thank you very much. Senator Vitter.

Senator VITTER. Madam Administrator, it appears in the proposal's accompanying regulatory impact analysis that climate benefits are calculated using your interagency working group's social cost of carbon estimates. Previously, I have asked why the SCC estimates do not include a domestic cost benefit calculation as required, versus just a global cost benefit calculation.

So I will ask in this context, why did EPA again not include that domestic cost benefit calculation in regard to CO₂? And is it because, as under the Brookings Institution analysis, if that analysis is correct, the benefits are largely enjoyed by other countries, while all the cost is borne by the United States?

Ms. MCCARTHY. Let me just make a couple of comments, and I am happy to answer your question. The costs and benefits associated with this rule are not just benefits in terms of reduced carbon, but also in terms of health benefits. And each of them far exceed the costs associated with the rule.

Senator VITTER. I don't want to cut you off, but I have a very limited time. Did you all do a domestic cost benefit analysis as required?

Ms. MCCARTHY. We did exactly the requirements for OMB and the law that we needed to do for the power—

Senator VITTER. Did you do a domestic cost benefit?

Ms. MCCARTHY. That was not, it was considered to be not the most appropriate way to look at it, it is looked at globally.

Senator VITTER. You don't think that is required by the law?

Ms. MCCARTHY. We actually followed all of the procedures we needed to do for the Office of Management and Budget.

Senator VITTER. Well, I disagree with you about that, I think it is required.

Ms. MCCARTHY. OK.

Senator VITTER. I also think it is useful to know a domestic, a U.S., we are representing U.S. citizens, a U.S. cost benefit analysis.

Let me ask you several Louisiana-specific things, which I am concerned about. In reviewing EPA's calculations regarding Louisiana performance goals, we in our State discovered that it appears EPA included at a capacity factor of 70 percent at least two, maybe more natural gas combined cycle units that are not operational, are not fully operational. It is a significant mistake that makes our burden significantly larger.

Is that going to be corrected? Are those mistakes elsewhere in State plans?

Ms. MCCARTHY. Senator, the reason for the comment period is to take a look at all of the State data, as well the framing that we had put out there. So we are open to comment.

But we have not in this rule required any State to operate their NGCC at a 70 percent capacity. And if in fact we have overestimated the amount of fossil fuel pollution generated in Louisiana, it would be a benefit to know that for both the State and us.

Senator VITTER. OK. We are certainly going to get that to you. But I just want to note that factored into the EPA's Louisiana plan are just facts that aren't there, capacity that isn't there, that isn't operating.

Ms. MCCARTHY. Well, actually, that would be a benefit to the State.

Senator VITTER. I am also concerned because Louisiana has some major, significant, job-producing industrial projects coming online in the next five to 10 years, in particular. So that is going to dramatically increase electricity demand. Did EPA factor into State emission targets that sort of economic growth and necessary load growth? Or did it only factor into State emission targets a demand destruction and reduce growth?

Ms. MCCARTHY. Actually, the reason why we took this comprehensive approach instead of a within-the-fence line look at each facility was recognizing that the economy needs to grow, and making sure that States have the flexibility to design their plans for exactly this reason. So States will be able to continue to grow and design a plan that will accommodate that.

Senator VITTER. In Louisiana's case, what demand growth did you build in? Because again, we don't have average demand growth, or we don't have growth that we are experiencing now as

a Nation, which was very low. We have major industrial projects coming online.

Ms. MCCARTHY. Yes.

Senator VITTER. So is that specifically factored in?

Ms. MCCARTHY. It is certainly considered, economic growth is part of what is considered when we look at energy prices and we look at the challenges associated with keeping demand down while the economy grows.

Senator VITTER. Were those specific major industrial projects factored in?

Ms. MCCARTHY. I don't believe that, they, I really can't answer the question in terms of the way you are posing it, Senator. Because clearly, the economy is going to continue to grow. What we looked at was what efforts can we accommodate for States to take credit for to keep their energy demand down. We believe the steps we are asking them to take are practical and reasonable.

Senator VITTER. What I am hearing is you factored in overall national economic growth. That is not what I am talking about. I am talking about huge Louisiana-specific industrial projects that require major load growth. And what I am hearing is that wasn't factored into the Louisiana plan. And that is a big problem.

Ms. MCCARTHY. Well, we are happy to take a look at it. And as I am sure you are aware, this is about national impacts in the RIA that were designed and developed. We are going to continue to analyze that. But the most important thing right now in the comment period is for us to look at this data, make sure that we have it. And I think as you know, EPA works very hard in between comment and final to make sure we get this right.

Senator BOXER. OK, we will turn to Senator Cardin.

Senator CARDIN. Thank you, Madam Chair.

Again, Administrator McCarthy, as I have indicated in my opening statement, thank you for your leadership on this issue and thank you for following the law, and thank you for giving adequate time for comment, which I think is important. We want to get this right and the comment period is extremely important.

I want to talk about a State like Maryland. Maryland has taken steps over the years to try to reduce its carbon footprint. Our utilities have been cooperative and have made investments to reduce emissions. They have done that by making significant investments, and it has been very positive to our environment.

But as I have mentioned previously, we are downstream from a lot of carbon emissions. So we can do only a certain amount, and therefore it is critically important that all States do their share for the United States to make the type of impact that we need to make.

I noted in my opening comments that you have given flexibility and you have allowed the states to come up with a plan that they believe is best for their State. In Maryland's case, we are part of RGGI. We have been there since 2005 and have worked with our regional partners to try to get plans that can benefit the entire region.

Could you just share with us how the proposed regulation deals with States that have already made progress and have joined with

regional partners? How is that dealt with in the proposed regulations?

Ms. MCCARTHY. Well, the proposed regulation calls attention to the regional partnerships that have already been developed. We actually allow the flexibility to go it alone or to join other States. We do recognize the Regional Greenhouse Gas Initiative in those States for their leadership on this.

We also developed an economic analysis that took a look at the cost-effectiveness of going it alone, nationally, each State on their own versus these regional partnerships, just to show how cost-effective those approaches can be.

And we have also provided important implementation flexibility so there is a longer window of opportunity to develop plans if States are looking at these regional approaches, which can take a little bit longer to develop and implement.

So we are trying to give States flexibility to continue with the programs they have, which have been very effective and have shown significant leadership, or to develop programs as they see fit. But we do tremendous value in these regional partnerships and we want that value to continue to be basically available to everybody and perhaps expanded.

Senator CARDIN. So when you have neighboring States that have made progress in reducing their carbon footprint, that is allocated to their individual target under the rule? Is that how it works? How does that mathematically work?

Ms. MCCARTHY. Mathematically, we have indicated that if States, let me give you an example, perhaps one of the most difficult is renewable. If States are using renewables as a way to shift to a lower carbon sources, they can do it in their own home State or they can build the renewable energy facility in another and take credit for that.

So we are accommodating an accounting system that allows regional approaches to be robust, that allows them to be specifically designed. Even if you want to do regional just for renewable, but you want to do the rest in your own State, that is fine too.

So one of the challenges with this rule is it is so flexible that States have many choices and we are trying to work with them individually, which we continue to meet with them and regionally to explain how the accounting system would work and how these different approaches might benefit their States in a way that they will think is most important.

Senator CARDIN. The flexibility issue, the States have pretty much carte blanche as to how they achieve their balances and they can, you mentioned renewable, you mentioned improvements to their power plants. What are the parameters under which the States can operate?

Ms. MCCARTHY. The only obligation that the States have under this rule is to achieve those State targets in a timely way. So we have based those States' targets on carbon intensity. Basically it is an amount of carbon pollution you emit per megawatt hour of electricity you generate at those fossil fuel facilities. So you have a wealth of opportunity, you can use a traditional approach and you can set a pollution requirement for each of those facilities. We do that, that is easy to do, or you can use a different approach in

which you actually calculate renewables and you actually look at energy efficiency program investments and you use those to keep demand down and then you calculate what you are emitting at those facilities and you see whether you made your target.

Senator CARDIN. I would just make a comment. This is to me what federalism is about. You will get States that will make progress in a very cost-effective way that other States will look at, will use, and we will get the most cost-effective way to reduce the emissions. So again, I thank you for your leadership and I thank you for the flexibility that you have given our States in recognizing our States can come up with creative ways to deal with this problem.

Ms. MCCARTHY. Thank you, and Senator, I think a lot of States are thinking about what RGGI has done. I know the Western Governors are working together.

Senator BOXER. Sorry, but we have to move forward. Senator Wicker.

Senator WICKER. Thank you, Madam Chair.

I hold in my hand a publication from the Global Warming Petition Project, Summary of Peer-Reviewed Research consisting of two pages, qualification of signers consisting of one-page and frequently asked questions of the Global Warming Petition project consisting of four pages. I ask that they be inserted into the record at this point.

Senator BOXER. Without objection, so ordered.
[The referenced information follows:]

Global Warming Petition Project

- Home
- Summary of Peer-Reviewed Research
- Letter From Frederick Seitz
- List of Signers By State
- List of Signers By Name
- Purpose of Petition
- How Petition is Circulated
- Instructions for Signing Petition
- Qualifications of Signers
- Frequently Asked Questions

Summary of Peer-Reviewed Research

Most scientists have a detailed knowledge of their own narrow field of specialization, a general knowledge of fundamental science, an understanding of the scientific method, and a mental model that encompasses a broad range of scientific disciplines. This model serves as the basis of their thoughts about scientific questions.

When a scientist desires to refine his understanding of a specific scientific subject, he often begins by reading one or more review articles about that topic. As he reads, he compares the facts given in the review with his mental model of the subject, refining his model and updating it with current information. Review articles do not present new discoveries. The essential facts given in the review must be referenced to the peer-reviewed scientific research literature, so that the reader can check the assertions and conclusions of the article and obtain more detailed information about aspects that interest him.

A 12-page review article about the human-caused global warming hypothesis is circulated with the petition. To view the entire article in [html](#), [150-dpi PDF](#), [300-dpi PDF](#), [600-dpi PDF](#), [Spanish](#) or figures alone in [powerpoint](#) or [flash](#), click on the appropriate item in this sentence.

Environmental Effects of Increased Atmospheric Carbon Dioxide

Abstract: The environmental effects of increased atmospheric CO₂ are discussed. The effects of increased CO₂ on the global climate system are discussed. The effects of increased CO₂ on the global carbon cycle are discussed. The effects of increased CO₂ on the global nitrogen cycle are discussed. The effects of increased CO₂ on the global phosphorus cycle are discussed. The effects of increased CO₂ on the global sulfur cycle are discussed. The effects of increased CO₂ on the global oxygen cycle are discussed. The effects of increased CO₂ on the global hydrogen cycle are discussed. The effects of increased CO₂ on the global helium cycle are discussed. The effects of increased CO₂ on the global lithium cycle are discussed. The effects of increased CO₂ on the global beryllium cycle are discussed. The effects of increased CO₂ on the global boron cycle are discussed. The effects of increased CO₂ on the global calcium cycle are discussed. The effects of increased CO₂ on the global magnesium cycle are discussed. The effects of increased CO₂ on the global sodium cycle are discussed. The effects of increased CO₂ on the global potassium cycle are discussed. The effects of increased CO₂ on the global chromium cycle are discussed. The effects of increased CO₂ on the global manganese cycle are discussed. The effects of increased CO₂ on the global iron cycle are discussed. The effects of increased CO₂ on the global cobalt cycle are discussed. The effects of increased CO₂ on the global nickel cycle are discussed. The effects of increased CO₂ on the global copper cycle are discussed. The effects of increased CO₂ on the global zinc cycle are discussed. The effects of increased CO₂ on the global gallium cycle are discussed. The effects of increased CO₂ on the global germanium cycle are discussed. The effects of increased CO₂ on the global arsenic cycle are discussed. The effects of increased CO₂ on the global selenium cycle are discussed. The effects of increased CO₂ on the global bromine cycle are discussed. The effects of increased CO₂ on the global iodine cycle are discussed. The effects of increased CO₂ on the global cadmium cycle are discussed. The effects of increased CO₂ on the global mercury cycle are discussed. The effects of increased CO₂ on the global thallium cycle are discussed. The effects of increased CO₂ on the global lead cycle are discussed. The effects of increased CO₂ on the global tin cycle are discussed. The effects of increased CO₂ on the global antimony cycle are discussed. The effects of increased CO₂ on the global tellurium cycle are discussed. The effects of increased CO₂ on the global bismuth cycle are discussed. The effects of increased CO₂ on the global polonium cycle are discussed. The effects of increased CO₂ on the global astatine cycle are discussed. The effects of increased CO₂ on the global francium cycle are discussed. The effects of increased CO₂ on the global radium cycle are discussed. The effects of increased CO₂ on the global actinium cycle are discussed. The effects of increased CO₂ on the global thorium cycle are discussed. The effects of increased CO₂ on the global uranium cycle are discussed. The effects of increased CO₂ on the global neptunium cycle are discussed. The effects of increased CO₂ on the global plutonium cycle are discussed. The effects of increased CO₂ on the global americium cycle are discussed. The effects of increased CO₂ on the global curium cycle are discussed. The effects of increased CO₂ on the global berkelium cycle are discussed. The effects of increased CO₂ on the global californium cycle are discussed. The effects of increased CO₂ on the global einsteinium cycle are discussed. The effects of increased CO₂ on the global fermium cycle are discussed. The effects of increased CO₂ on the global mendelevium cycle are discussed. The effects of increased CO₂ on the global nobelium cycle are discussed. The effects of increased CO₂ on the global lawrencium cycle are discussed. The effects of increased CO₂ on the global roentgenium cycle are discussed. The effects of increased CO₂ on the global darmstadtium cycle are discussed. The effects of increased CO₂ on the global tennessine cycle are discussed. The effects of increased CO₂ on the global oganesson cycle are discussed.

SUMMARY

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The factual information cited in this article is referenced to the underlying research literature, in this case by 132 references listed at the end of the article. Although written primarily for scientists, most of this article can be understood without formal scientific training. This article

- Henry E. Vogel
- Inna V. Zayas
- Thomas Corrigan
- Edward George Billpach
- R. H. Prewitt Jr.
- David R. Berberick
- Donald V. Mickler
- Gregory S. Caine
- David E. Wahl Jr.
- John A. Flores
- Alfred A. Erickson
- Greg B. Zethon
- Joseph M. Killam
- Melvin Bruce Welch
- Arthur G. Cullati
- Nathan L. Hartwig
- H. Scott Gingrich
- Robert F. Nagay
- Scott A. Owen
- George E. Howes
- Bernhard Edward Keiser
- Gordon F. Ziesing
- Karl J. Haugland
- Stephen J. Kazanich
- Robert C. Berke
- Tom B. Erickson
- Chester R. Upham Jr.
- James Winton Patton
- James R. Hughes
- Amir Duffin
- Bugden John Rosa
- Joe M. Straus
- Randall L. Taylor
- Paul M. Merfield
- Mark Dible
- Mary Felner Furell
- Richard A. Werner
- Joëth A. Milearsky
- Kevin Michael Bohacs
- Orlando A. Arana
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- Maite Dagan
- Joseph A. Gerard
- William L. Orwell
- Grover C. Blislor
- Frank R. Crua
- Gary Jordan
- Robert H. Bourke
- Lawrence Wiedman
- Dan A. Yaeger
- Charles L. Yurdy
- Larry D. Miller
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- Stephen T. Blanchard
- Jeffrey C. Sturm
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- David V. Goushor
- Kenneth Dean Spence
- Victor H. Peralta
- Travis G. Flits Jr.
- David W. Rehnerman
- Baldev Singh Mangat
- J. Herbert Riley
- Donald J. Barron
- Joseph Kane
- Kathy Qin
- Harvey B. Bouswell
- Albert M. Demont
- Anne R. Frank
- Paul F. Halfpenny
- Alfred Douglas Reichle
- Ronald Hull

was submitted to many scientists for comments and suggestions before it was finalized and submitted for publication. It then underwent ordinary peer review by the publishing journal.

The United Nations IPCC also publishes a research review in the form of a voluminous, occasionally-updated report on the subject of climate change, which the United Nations asserts is “authored” by approximately 600 scientists. These “authors” are not, however – as is ordinarily the custom in science – permitted power of approval the published review of which they are putative authors. They are permitted to comment on the draft text, but the final text neither conforms to nor includes many of their comments. The final text conforms instead to the United Nations objective of building support for world taxation and rationing of industrially-useful energy.

Global Warming Petition Project

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Frequently Asked Questions

1. Is the Petition Project fulfilling expectations?

The project has fulfilled the expectations of its organizers. In PhD scientist signers alone, the project already includes 15-times more scientists than are seriously involved in the United Nations IPCC process. The very large number of petition signers demonstrates that, if there is a consensus among American scientists, it is in opposition to the human-caused global warming hypothesis rather than in favor of it.

Moreover, the current totals of 31,487 signers, including 9,029 PhDs, are limited only by Petition Project resources. With more funds for printing and postage, these numbers would be much higher.

2. Has the petition project helped to diminish the threat of energy and technology rationing?

The accomplishments of science and engineering have transformed the world. They have markedly increased the quality, quantity, and length of human life and have enabled human beings to make many improvements in the natural environment of the Earth.

Today, scientists are seeing the accomplishments of science demonized and one of the three most important molecular substances that make life possible - atmospheric carbon dioxide (the other two being oxygen and water) - denigrated as an atmospheric "pollutant" in a widely circulated movie. Scientists who have carefully examined the facts know that this movie contains numerous falsehoods. This and many other similar misguided propaganda efforts in the media, naturally repel men and women who know the truth. The search for truth is the essence of science. When science is misrepresented, scientists are naturally incensed.

There is, therefore, a rapidly growing backlash of opposition among American scientists to this egregious misuse of the reputation and procedures of science. The Petition Project is helping to demonstrate this opposition and, therefore, to reduce the chances of misguided political reductions in science-based technology.

3. Who organized the Petition Project?

The Petition Project was organized by a group of physicists and physical chemists who conduct scientific research at several American scientific institutions. The petition statement and the signatures of its 31,487 signers, however, speak for themselves. The primary relevant role of the organizers is that they are among the 9,029 PhD signers of the petition.

William B. Hoenig Jr.
Lawrence Boucher
R. R. Hepp
Stephen Johanson
Paul McCoy Wright
Robert A. Meyer
Roger D. Mayhew
Clark William McCarty
Philip G. Crankovich
Sue Whitworth
James Kulick
Somnath Sarkar
Maurice Smith
Chih-Chang Hong
Mark W. Tassar
Peter Vokac
Charles H. Roth
Donald O'Shea
William E. Johnson
Henry E. Vogel
Inna V. Zayas
Thomas Corrigan
Edward George Bilpuch
R. H. Prescott Jr.
David R. Herberich
Donald V. Micklos
Gregory S. Coine
David E. Wahl Jr.
John A. Flores
Alfred A. Erickson
Greg D. Zeihen
Joseph M. Kilton
Melvin Bruce Welch
Arthur G. Cullari
Nathan L. Harwig
H. Scott Gangrich
Robert F. Nagaj
Scott A. Owen
George E. Hawes
Bernhard Edward Keiser
Gordon F. Ziesing
Karl J. Houghland
Stephen L. Kozarich
Robert C. Brete
Tom B. Erickson
Chester R. Upham Jr.
James Winston Patton
James R. Hodges
Amel Balla
Eugene John Rosa
Joe M. Straus
Randall I. Taylor
Paul M. Merfield
Mark Dible
Mary Felmer-Putrell
Richard A. Werner
Judith A. Miliarsky
Kevin Michael Boinacs
Orlando A. Arana
Thomas A. Schultz
Marie Dagan
Joseph A. Gerardi
William L. Orwell
Gower C. Ellisor
Frank R. Cray
Gary Jordan
Robert H. Bourke
Lawrence Wiedman
Dan A. Yoeger
Charles L. Yordy
Larry D. Miller
Michael W. Brinkmeier

4. Who pays for the Petition Project?

The Petition Project is financed by non-tax deductible donations to the Petition Project from private individuals, many of whom are signers of the petition. The project has no financing whatever from industrial sources. No funds or resources of the Oregon Institute of Science and Medicine are used for the Petition Project. The Oregon Institute of Science and Medicine has never received funds or resources from energy industries, and none of the scientists at the Institute have any funding whatever from corporations or institutions involved in hydrocarbon technology or energy production. Donations to the project are primarily used for printing and postage. Most of the labor for the project has been provided by scientist volunteers.

5. Does the petition list contain names other than those of scientist signers?

Opponents of the petition project sometimes submit forged signatures in efforts to discredit the project. Usually, these efforts are eliminated by our verification procedures. On one occasion, a forged signature appeared briefly on the signatory list. It was removed as soon as discovered.

In a group of more than 30,000 people, there are many individuals with names similar or identical to other signatories, or to non-signatories – real or fictional. Opponents of the petition project sometimes use this statistical fact in efforts to discredit the project. For examples, Perry Mason and Michael Fox are scientists who have signed the petition – who happen also to have names identical to fictional or real non-scientists.

6. Does the petition project list contain duplicate names?

Thousands of scientists have signed the petition more than once. These duplicates have been carefully removed from the petition list. The list contains many instances of scientists with closely similar and sometimes identical names, as is statistically expected in a list of this size, but these signers are different people, who live at different addresses, and usually have different fields of specialization. Primarily as a result of name and address variants, occasional duplicate names are found in the list. These are immediately removed.

7. Are any of the listed signers dead?

In a group of more than 30,000 people, deaths are a frequent occurrence. The Petition Project has no comprehensive method by which it is notified about deaths of signatories. When we do learn of a death, an "*" is placed beside the name of the signatory. For examples, Edward Teller, Arnold Beckman, Philip Abelson, William Nierenberg, and Martin Kamen are American scientists who signed the Petition and are now deceased.

8. Why is this effort called "Petition Project?"

Signatories to the petition have signed just the petition – which speaks for itself. The organizers – themselves scientists located at several scientific institutions – have designed the project to emphasize this single fact. The use of a post office box mailing address, a generic name – Petition Project, and other institutionally-neutral aspects of the project are intended to avoid the impression that the signatories have endorsed the agenda or actions of any institution, group, or other

activity. They are simply signers of this petition to the government of the United States, as written.

9. Why was the review article published in the *Journal of American Physicians and Surgeons*?

The authors chose to submit this article for peer-review and publication by the *Journal of American Physicians and Surgeons* because that journal was willing to waive its copyright and permit extensive reproduction and distribution of the article by the Petition Project.

10. Why is the Petition Project necessary?

In December 1997, then U. S. Vice-President Al Gore participated in a meeting in Kyoto, Japan during which he signed a treaty to ration world energy production based upon fear of human-caused global warming. This treaty was not, however, presented to the United States Senate for ratification.

Since before that Kyoto meeting and continuing to the present day, Mr. Gore and his supporters at the United Nations and elsewhere have claimed that the "science is settled" – that an overwhelming "consensus" of scientists agrees with the hypothesis of human-caused global warming, with only a handful of skeptical scientists in disagreement.

Moreover, for more than 10 years these proponents of world energy rationing have consistently argued that, in view of this claimed scientific "consensus," no further discussion of the science involved in this issue is warranted before legislative action is taken to heavily tax, regulate, and ration hydrocarbon energy.

Since, however, these claims were not successful in convincing the United States government to initiate energy rationing, the United Nations has held a series of international meetings attended by a central group of about 600 scientists, some additional scientists outside of this group, and a large number of political and bureaucratic representatives – approximately 2,000 in all. The United Nations has also hosted larger meetings, including many non-scientist participants from environmental, business, and political organizations.

During and after each of these meetings, there have been further publicity campaigns claiming that the "science is settled" – that the "consensus" of scientists in favor of the hypothesis of human-caused global warming is so overwhelming that further examination of the science is unnecessary.

Realizing, from discussions with their scientific colleagues, that this claimed "consensus" does not exist, a group of scientists initiated the Petition Project in early 1998. Thousands of signatures were gathered in a campaign during 1998-1999. Between 1999 and 2007, the list of petition signatories grew gradually, without a special campaign. Between October 2007 and March 2008, a new campaign for signatures was initiated. The majority of the current listed signatories signed or re-signed the petition after October 2007. The original review article that accompanied the petition effort in 1998-1999 was replaced in October 2007 with a new review incorporating the research literature up to that date.

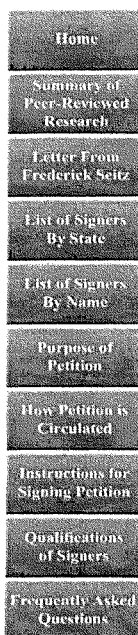
The renewed petition campaign in 2007 was prompted by an escalation of the claims of "consensus," release of the movie "An Inconvenient Truth" by Mr. Al Gore, and related events. Mr. Gore's movie, asserting a "consensus" and "settled science" in agreement about human-caused global warming, conveyed the claims about human-caused global warming to ordinary movie goers and to public school children, to whom the film was widely distributed. Unfortunately, Mr. Gore's movie contains many very serious incorrect claims, which no informed, honest scientist could endorse.

The campaign to severely ration hydrocarbon energy technology has now been markedly expanded. In the course of this campaign, many scientifically invalid claims about impending climate emergencies are being made. Simultaneously, proposed political actions to severely reduce hydrocarbon use now threaten the prosperity of Americans and the very existence of hundreds of millions of people in poorer countries.

As Professor Seitz states, in his Petition Project letter which speaks of this impending threat to all humanity, "It is especially important for America to hear from its citizens who have the training necessary to evaluate the relevant data and offer sound advice."

The Petition Project is a means by which those citizens are offering that advice.

Global Warming Petition Project



Qualifications of Signers

Signatories are approved for inclusion in the Petition Project list if they have obtained formal educational degrees at the level of Bachelor of Science or higher in appropriate scientific fields. The petition has been circulated only in the United States.

The current list of petition signers includes 9,029 PhD; 7,157 MS; 2,586 MD and DVM; and 12,715 BS or equivalent academic degrees. Most of the MD and DVM signers also have underlying degrees in basic science.

All of the listed signers have formal educations in fields of specialization that suitably qualify them to evaluate the research data related to the petition statement. Many of the signers currently work in climatological, meteorological, atmospheric, environmental, geophysical, astronomical, and biological fields directly involved in the climate change controversy.

The Petition Project classifies petition signers on the basis of their formal academic training, as summarized below. Scientists often pursue specialized fields of endeavor that are different from their formal education, but their underlying training can be applied to any scientific field in which they become interested.

Outlined below are the numbers of Petition Project signatories, subdivided by educational specialties. These have been combined, as indicated, into seven categories.

1. Atmospheric, environmental, and Earth sciences includes 3,805 scientists trained in specialties directly related to the physical environment of the Earth and the past and current phenomena that affect that environment.
2. Computer and mathematical sciences includes 935 scientists trained in computer and mathematical methods. Since the human-caused global warming hypothesis rests entirely upon mathematical computer projections and not upon experimental observations, these sciences are especially important in evaluating this hypothesis.
3. Physics and aerospace sciences include 5,812 scientists trained in the fundamental physical and molecular properties of gases, liquids, and solids, which are essential to understanding the physical properties of the atmosphere and Earth.
4. Chemistry includes 4,822 scientists trained in the molecular interactions and behaviors of the substances of which the atmosphere and Earth are composed.
5. Biology and agriculture includes 2,965 scientists trained in the functional and environmental requirements of living things on the Earth.
6. Medicine includes 3,046 scientists trained in the functional and environmental requirements of human beings on the Earth.
7. Engineering and general science includes 10,102 scientists trained primarily

Donald R. Yates
 William B. Hoelgl Jr.
 Lawrence Boucher
 R. R. Hege
 Stephen Johnston
 Paul McCoy Wright
 Robert A. Meyer
 Roger D. Mayhew
 Clark William McCarty
 Philip C. Crankovich
 Sue Whitworth
 James Kullek
 Sunmath Sarkar
 Maurice Smith
 Chih-Cheng Hung
 Mark W. Tesar
 Peter Volok
 Charles E. Keith
 Donald O'Shea
 William E. Johnson
 Henry E. Vogel
 Inna V. Zayas
 Thomas Corrigan
 Edward George Blipsh
 R. H. Prescott Jr.
 David R. Berberich
 Donald V. Mecklos
 Gregory S. Caine
 David E. Wahl Jr.
 John A. Flores
 Alfred A. Erickson
 Greg D. Zeihen
 Joseph M. Kilian
 Melvin Bruce Welch
 Arthur G. Cullati
 Nathan L. Harroig
 H. Scott Gangrish
 Robert F. Nagaj
 Scott A. Owen
 George E. Hayes
 Bernhard Edward Keiser
 Gordon F. Ziesing
 Karl J. Houghland
 Stephen L. Kozarich
 Robert C. Beste
 Tim B. Erickson
 Chester R. Upham Jr.
 James Wilton Paton
 James R. Hodges
 Amir Balfaz
 Eugene John Rosa
 Joe M. Strauss
 Randall L. Taylor
 Paul M. Merfield
 Mark Dille
 Mary Felmer Funnell
 Richard A. Werner
 Judith A. Milarsky
 Kevin Michael Bohacs
 Orlando A. Arana
 Thomas A. Schultz
 Marie Dugan
 Joseph A. Gerard
 William L. Obwell
 Grover C. Ellisar
 Frank R. Crua
 Gary Jordan
 Robert H. Bourke
 Lawrence Wiedman
 Dan A. Yarger
 Charles L. Yordy
 Larry D. Miller

in the many engineering specialties required to maintain modern civilization and the prosperity required for all human actions, including environmental programs.

The following outline gives a more detailed analysis of the signers' educations.

Atmosphere, Earth, & Environment (3,805)

1. Atmosphere (579)
 - I) Atmospheric Science (112)
 - II) Climatology (39)
 - III) Meteorology (343)
 - IV) Astronomy (59)
 - V) Astrophysics (26)
2. Earth (2,240)
 - I) Earth Science (94)
 - II) Geochemistry (63)
 - III) Geology (1,684)
 - IV) Geophysics (341)
 - V) Geoscience (36)
 - VI) Hydrology (22)
3. Environment (986)
 - I) Environmental Engineering (487)
 - II) Environmental Science (253)
 - III) Forestry (163)
 - IV) Oceanography (83)

Computers & Math (935)

1. Computer Science (242)
2. Math (693)
 - I) Mathematics (581)
 - II) Statistics (112)

Physics & Aerospace (5,812)

1. Physics (5,225)
 - I) Physics (2,365)
 - II) Nuclear Engineering (223)
 - III) Mechanical Engineering (2,637)
2. Aerospace Engineering (587)

Chemistry (4,822)

1. Chemistry (3,129)
2. Chemical Engineering (1,693)

Biochemistry, Biology, & Agriculture (2,965)

1. Biochemistry (744)
 - I) Biochemistry (676)
 - II) Biophysics (68)
2. Biology (1,438)
 - I) Biology (1,049)
 - II) Ecology (76)
 - III) Entomology (59)
 - IV) Zoology (149)
 - V) Animal Science (105)
3. Agriculture (783)
 - I) Agricultural Science (296)
 - II) Agricultural Engineering (114)
 - III) Plant Science (292)
 - IV) Food Science (81)

Medicine (3,046)

1. Medical Science (719)
2. Medicine (2,327)

General Engineering & General Science (10,102)

1. General Engineering (9,833)
 - I) Engineering (7,280)
 - II) Electrical Engineering (2,169)
 - III) Metallurgy (384)
2. General Science (269)

Senator WICKER. Thank you, Madam Chair. And I would read a portion of the petition signed by some 31,487 American scientists, over 9,000 of whom have Ph.Ds. "The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology and damage the health and welfare of mankind. There is no convincing scientific evidence that human release of carbon dioxide, methane or other greenhouse gases is causing or will cause in the foreseeable future catastrophic heating of the earth's atmosphere and disruption of the earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects from the natural plant and animal environment of the earth."

I say this in response to the continued drumbeat from the other side of the aisle that the science is over with, it has been decided and everyone who disagrees is somehow some sort of a quack. To some 31,487 American scientists who have signed this petition, it is not settled science and I appreciate them being a contrary voice to get the peer review facts before us.

I would also point out, and I asked my first question about this, Madam Administrator, the attorney general of West Virginia recently wrote EPA, just month, and requested the withdrawal of the rule because, he says, EPA lacks the legal authority to adopt it. So while there may have been witnesses before this committee in recent days saying that EPA unquestionably has the authority to propose such a rule, the attorney general of West Virginia disagrees, and he points out this, Ms. McCarthy. He says that, "The Clean Air Act Section 111(d) affirmatively prohibits EPA from regulating any air pollutant emitted in an existing source category which is regulated under the national emission regime of Section 112 of the Clean Air Act."

So Section 111(d) says if it is regulated under 112, you can't regulate it any other way.

Now, EPA has imposed extensive regulations on existing coal-fired power plants under Section 112. Is that correct?

Ms. MCCARTHY. I think that the framing of the legal argument is incorrect, Senator.

Senator WICKER. Well, but let me ask you this. I am not asking you for that. I am asking you, does EPA impose regulations on existing coal-fired power plants under Section 112?

Ms. MCCARTHY. We certainly do.

Senator WICKER. OK, thank you for that. So based on that, Madam Chair, and members of the committee, the attorney general of West Virginia says, having been regulated under Section 112, the EPA lacks the legal authority to further regulate these emissions under Section 111(d).

Let me ask you this also, time is fleeting, Ms. McCarthy. Did you tell Senator Vitter that your cost benefit analysis was done entirely on a global basis and was not—

Ms. MCCARTHY. No.

Senator WICKER. Please correct my understanding, then.

Ms. MCCARTHY. The Senator I think was asking me, and at least this is what I answered, as to whether or not the social costs of carbon benefits are looked at as benefits that are solely gained domestically or whether they are based on global benefits.

Senator WICKER. OK, well, good, so perhaps I did misunderstand and I am glad I did.

You conducted a cost benefit analysis as required by law, is that correct?

Ms. MCCARTHY. Yes.

Senator WICKER. Was this conducted on a State by State basis?

Ms. MCCARTHY. No, it was a national analysis.

Senator WICKER. OK, it was not done—

Ms. MCCARTHY. The challenge here, sir, is we are giving so much State flexibility that it can only be illustrative, because it really is going to be up to the individual States how to design the strategies to achieve these reductions.

Senator WICKER. OK, so you didn't do it on a regional basis?

Ms. MCCARTHY. We did the analysis, my understanding is, and we can certainly followup with more specifics, is that it looks at national impacts.

Senator WICKER. OK, please do that.

Ms. MCCARTHY. Although we will over time get more specific as States make decisions and comments come in.

Senator WICKER. OK, I see my time is expired. I may submit a question to the record for you, Ms. McCarthy, with regard to the stranded costs of two projects that Mississippi has undertaken to comply with recent Federal regulations. These projects will have to be completely shut down under your proposed rule if it goes forward. Thank you.

Ms. MCCARTHY. I would be happy to look at that for you, sir. Stranded assets is an important issue.

Senator BOXER. Thank you so much, Senator. We turn to Senate Whitehouse.

Senator WHITEHOUSE. Thank you very much.

Thank you very much, Administrator McCarthy, for being here, and thank you for your excellent work. Carry on.

With respect to my colleague's point that the science isn't settled on this, I am afraid to say I think he is just factually wrong. I think that it is not just me who thinks the science is settled, NOAA thinks the science is settled, NASA thinks the science is settled, and they have rovers driving around on Mars right now. They know a little something about science. The U.S. Navy thinks the science is settled. The head of our Pacific Command says climate change is going to be the biggest threat we face in the Pacific.

Every major American scientific society thinks that the science is settled. The property casualty insurance and reinsurance industry, which bets hundreds of billions of dollars on this thinks that the science is settled.

There is an, what I would call, an eccentric fringe, that continues to deny and they are entitled to have their views. They are entitled to have their views. But we as responsible Members of Congress should not be basing public policy on eccentric fringe views. These are views that don't even hold traction with young Republican voters. Young Republican voters under the age of 35 think that climate denial is, and these are the poll's words, not mine, ignorant, out of touch or crazy.

So if that is what young Republican voters think about this, then I really don't think that having this dispute here is very productive.

Let me ask you, Ms. McCarthy, this proposal has been built based on an unprecedented outreach by you and by the Environmental Protection agency involving utilities, involving Republican elected officials, involving a whole wide array of stakeholders. How prominent, in your conversations outside of the United States capital, is this outright denial that climate change is real argument?

Ms. MCCARTHY. It is not a prominent issue. I have gone to many, many States and there is a vast concern in each State over the changes in the climate they are already seeing. We are no longer talking about projections of change. We are talking about adapting to the change that is already happening and the devastation that that is causing.

So there is very little doubt that I see and experience. The question really has always, is right now on the table, what do we do about it? Do we actually meet our responsibility and take action or do we not? And in this rule, we took very much to heart the fact that when States and utilities were not arguing the science but instead arguing the actions that we thought it was prudent to look at what the science told us in terms of technology availability, practicality and cost, what we are supposed to do under the Clean Air Act, and to say what the target should be an allow each State to get at that target the way they thought was best for their individual State.

This is the most respectful rule at the Federal level that I have ever been involved in, either as a recipient of that rule or as a designer in terms of recognizing the leadership of States and allow them to continue to lead.

Senator WHITEHOUSE. I was down in Florida not too long ago touring the coasts, where climate change is really undeniable, sea level rise is something you measure with the equivalent of a yardstick. It is not really subject to much rational debate. People understand that.

And I met with the Republican mayor of Monroe County, who has developed her own climate change task force, they are vitally concerned about what sea level rise means, particularly to the Keys. So in your experience, again, outside of this building, and outside of the influence in Washington that polluters bear, when you are out there as a part of your outreach process, this Republican mayor in Monroe County would not be an outlier among Republicans, in your experience?

Ms. MCCARTHY. No, not at all. And Republicans and Democrats that I come across are worried about climate change and the impacts. They have kids that have asthma. They have properties that they are worried about from flooding, from drought, from fire, and they want us to take action.

Senator WHITEHOUSE. Last quick question. Is extreme weather, high winds and storms, associated with climate change?

Ms. MCCARTHY. Yes.

Senator WHITEHOUSE. And how do extreme weather, high winds and storms do in terms of the electricity grid?

Ms. MCCARTHY. It is very challenging. We are dealing with, climate change is a reason why you would want to continue to invest in electricity and infrastructure that supports.

Senator WHITEHOUSE. But even if you were only interested in electric grid reliability, and all the issues that this raises, even if you were only interested in electric grid reliability, you should still have a concern about climate change and carbon pollution?

Ms. MCCARTHY. Oh, absolutely. In fact, the funny thing is that when people ask me about the polar vortex, some of them pose it like it is a reason not to take action. It is exactly the reason we have to take action.

Senator WHITEHOUSE. Thank you, Chairman.

Senator BOXER. Thank you, Senator. We turn to Senator Fischer.

Senator FISCHER. Thank you again, Madam Chair, and thank you, Administrator, for being here. These are very complicated issue and I would like to bring the focus back to those issues. I have a question that is a bit long, it is in the weeds, I hope you will bear with me on it. I am going to read it to you, so I get all the facts in here correct as I pose it to you.

In building block two, the EPA assumes that gas plants will run far more in order to run coal-fired plants far less. This will reduce the heat rate efficiency of coal-fired plants as running any plant less and on an intermittent basis always reduces efficiency.

To offer an analogy, I think this is the equivalent of operating a car in city driving, where it is stop and go, which reduces the efficiency in the form of miles per gallon as compared to when you are on a constant rate on highway driving.

What this means is that building block two, which calls for running coal-fired plants less, is directly at odds with the goals of building block one, which calls for improving the heat rate of coal-fired plants. So building blocks one and two are in direct opposition with each other. You can't run both coal plants less while running gas plants more and then turn around and argue that the heat rate of coal plants should be improved.

So did the EPA consider that the amount of switching to natural gas effectively required by this rule would require coal-powered plants to operate less, thus driving up heat rates substantially? And I think that would just obliterate any heat rate improvement that we would see at these coal units.

Ms. MCCARTHY. Let me give a little bit of an explanation. I don't want to take too much of your time. But the building blocks were really opportunities, practical, affordable opportunities to reduce carbon emissions that went into the setting of the State standards. None of them are requirements. They are not requirements. States can actually achieve and comply with those standards in any way they design.

So if States are heavily invested in renewable, and they need NGCC or peaking units done in a way that is much more intermittent than the 70 percent capacity rate, they can just simply not do that. None of these are requirements. You need to do none of them. But they actually were our analysis of what we thought were practical and affordable steps that could be taken to get the system more efficient and to shift to cleaner sources.

So States can use whatever creative approach they want to use as long as they are getting at the reductions in those fossil fuel plants that are required.

Senator FISCHER. You have talked a lot about flexibility here, the flexibility for the States. But I think that that flexible solution in effect is going to shut down coal plants. Because if you are going to avoid that conflict between that bucket one and bucket two, it is going to call for heat improvements for the coal plants in bucket one. But under bucket two, you are going to run it less.

So how does that make it more flexible? I think the conflict there is just going to mean the retirement of these coal plants.

Ms. MCCARTHY. Let me give you an example. I know that the State of West Virginia was mentioned. If you look at the State standard for West Virginia, the State standard is not enormously aggressive. In fact, many have questioned why it isn't more aggressive.

Senator FISCHER. I'm not questioning it.

Ms. MCCARTHY. I know. And neither am I. We will take comment.

But what it says, we actually looked at the fact that they are heavily dependent on coal, and their answer may very well be to invest in that coal to make it more efficient moving forward. In fact, if you look at our analysis, it shows that coal today, I am sorry, in 2012 actually generated about 37 percent of the electricity. What we are projecting is in 2030 that is going to be 31 percent.

Senator FISCHER. Right.

Ms. MCCARTHY. So it will remain. So we think coal States, heavily dependent coal States will invest in coal. They will most likely not take advantage of the shifting to lower sources and they won't need to.

Senator FISCHER. I have just a few seconds, but my concern is that it just effectively shuts down plants. I did want to touch on another issue, just very quickly. I had the opportunity earlier this week to have a dinner with my colleagues on both sides of the aisle, we met with some officials with the Department of Defense. We talked about national security, we talked about global security, and the need that we see for that global security, especially in Europe with regard to the belligerent moves of Russia, and our NATO allies, what they face there with natural gas.

How are we going to address not just national security but global security when we have such limits put on natural gas?

Senator BOXER. Let me just say, if you can make your answer really brief, we have a vote started. My goal was to try to get everybody in prior to the vote. We might be able to do it if we stick to the time. So can you speak briefly to that, and then we are going to move to Senator Carper.

Ms. MCCARTHY. Again, this is a very consistent strategy to support the President's all of the above energy policy. It does not set specific limits on any fuel. It expects all fuels to continue to be operated at significant levels. But it will provide a more efficient energy supply system, and it will reduce the harmful carbon pollution that is impacting us.

Senator FISCHER. Hopefully we can work with you on that further.

Senator BOXER. Thank you very much. We move to Senator Carper.

Senator CARPER. Administrator McCarthy, can you give me some idea of what percentage of all electricity is generated by nuclear in this Country today? Is it about 20 percent? I think it is.

Ms. MCCARTHY. It is something in that order, yes.

Senator CARPER. Right around 20 percent. Any idea of what percentage of zero-emission electricity is generated by nuclear in our Country today?

Ms. MCCARTHY. Zero.

Senator CARPER. Think about that. What percentage of the electricity that has essentially zero emission is generated by nuclear? It is not zero. It has to be close to I would say 50 percent. I was just thinking about that, because there is hydro, there is solar, and there is wind. That has to be close to 50 percent. Five zero.

My staff and I have heard concerns that EPA does not treat all zero-emitting resources the same in your proposal. Specifically, we are starting to hear that local energy could be disadvantaged by this rule because of specific benefits that renewable enjoy over nuclear and other energy sources. We have even heard concerns that some nuclear power plants may be forced to close down because of the way that the rule is structured. That doesn't make a lot of sense.

You and I have talked in the past about nuclear, and we both agree that nuclear has to be part of the mix so we can meet our climate goals. Just to make sure we are on the same page, do you believe that nuclear energy, do you believe that nuclear energy should be on an equal footing with renewable energy to help States meet their carbon goals set in this proposal? That is the first part of my question. And second, have you heard similar concerns from the nuclear industry? So can you tell us what you believe is the crux of the problem in the proposal and commit today to resolving this issue, please?

Ms. MCCARTHY. Sure. First of all, as you indicated, nuclear energy is zero-emitting carbon energy generating technology. And for that reason, we have actually gone to great lengths in this proposal to make sure that States are aware of that and that nuclear energy is factored into the standard-setting process. We have also called attention to the fact that there are some nuclear facilities that seem to be on the fence as to whether or not they are competitive today in a way that would allow them to go through the relicensing process and make that process worth it, if you will.

And so we have been highlighting that issue in this proposal and encouraging States to really pay attention to this. Because the replacement of a base load capacity unit that is zero-carbon emitting will be a significant challenge for States who are right now relying on those nuclear facilities.

But we have heard that maybe we didn't go far enough or we went too far. So we will be listening to those comments, because we certainly have heard them.

Senator CARPER. OK. It is important that you do, thank you.

Now that the proposal has been released, beyond the nuclear concerns, have you already heard back from industry and/or States that you think are valid concerns and could be addressed in the final rule? Is there any positive feedback that you want to share with us today, please?

Ms. MCCARTHY. I think a lot of the comments that we are hearing are valid and we need to look at them. Some of them are whether or not we understood certain States' circumstances or whether or not the framing of the rule is as good as it should be. We have heard from leadership States that we didn't give them enough credit for their leadership. We have heard from other States that we have given too much credit.

So there are a lot of valid considerations here, and we are going to pay attention to each and every one of them. But I think we have a great head start with this proposal. Because of the listening we did before we even put pen to paper, it gave us a tremendous opportunity to put out a proposal that I think for all intents and purposes has been very well received.

But I know that States and utilities are rolling up their sleeves, trying to see whether or not they can make this work and how they can make it work to the advantage of their States and the utilities. And we will keep working with them every step of the way.

Senator CARPER. Madam Chair, just a closing thought. Coal is what, I think you said 37 percent of our generating capacity today from electricity, it is going to drop to 31 percent. That is still a lot. I would just say to my colleagues, there is a huge economic opportunity here. A huge economic opportunity. Just as there was economic opportunity in diesel emission reductions, created jobs, just as there was economic opportunity in reducing mercury emission, created jobs in technology that we can sell all over the world, there is similar opportunity here. Whoever can figure out how to economically, safely, smartly reduce emissions from these coal-fired plants, we are off to the races. Just to the market alone in China, it would be terrific.

So thank you very much. Carry forward.

Ms. MCCARTHY. Thank you, Senator.

Senator BOXER. OK, let me tell you what is happening. The floor said if we got there 11:20, 11:25, we would be OK. But I think what we are going to do, after we hear from Senator Inhofe, who wanted to go, is if it is OK with everybody, we will break. And then those of us who can come back, because I know Senator Markey is going to get some extra time, because he missed the opening statements. And Senator Barrasso wants to have another round and I would love to have another round.

So, come back. But we are going to end this on a very high note with my good friend, the Senator from Oklahoma.

Senator INHOFE. And if any of you want to go ahead and go on over there, I will tell you on the floor what I said.

Senator BOXER. Well, we don't want to miss it. Stop the clock, put it back to 5 minutes. We allow for jokes.

[Laughter.]

Senator INHOFE. Good for you.

Ms. McCarthy, there has been a lot of discussion as to what your authority is to do some of these things that are perceived to be

done. So let's just suppose a State, let's say Oklahoma, does not submit a State plan. And you develop a Federal plan for the State. How could you develop that rule using only existing authorities? Let me be specific.

Under existing authorities, can you currently require a State to have gas dispatched at 70 percent of capacity?

Ms. MCCARTHY. Senator, you are way ahead of me. Those are considerations that aren't even on the table right now. Right now we are looking at proposing a rule. I have great hopes that we will work very effectively with the States.

Senator INHOFE. I am talking about existing authorities today. Under your authority today, could you do something like that?

Ms. MCCARTHY. Not unless this rule were passed.

Senator INHOFE. OK, that is fine. Under the existing authority, you currently require a State to unilaterally restrict electricity demand by 1 and a half percent. Under current authority.

Ms. MCCARTHY. No, sir. Well—

Senator INHOFE. And under existing authority, could you currently mandate the use of renewable in a State?

Ms. MCCARTHY. We do not.

Senator INHOFE. OK. Now, let's say that a State does submit a plan and the renewable portfolio standard does apply. I would ask you if you could enforce it.

Ms. MCCARTHY. Actually, sir, we are not, we wouldn't be requiring any of those things here. What we are requiring is a certain level of carbon dioxide emissions from electricity generated by fossil fuels. That is what EPA would be actually requiring and mandating. How the States get there is certainly their choice.

Senator INHOFE. All right. So you are saying that under current law and policies that EPA couldn't enforce the State renewable portfolio standard, but under the ESPS rule that we are talking about, they may be able to, is that accurate?

Ms. MCCARTHY. That is one of the issues that we have raised. Because EPA often has things in State plans, some of which we enforce, some of which we don't. That is an issue that has been discussed.

Senator INHOFE. I'm saying under current law, you may be able to, under the ESPS, be able to—

Ms. MCCARTHY. Actually the one certainty I have is that we will be able to enforce the fossil, the amount of carbon dioxide from fossil fuel facilities, if this rule goes as proposed.

Senator INHOFE. OK. What I am trying to get to here, this rule would be a broad expansion of the authority that EPA has over States that has a broad political impact and could dramatically reshape an entire sector of the economy. Isn't that exactly what the Supreme Court ruled against in the UARG case, the expansion of authority that you would be having?

Ms. MCCARTHY. Actually, I don't think that the Supreme Court indicated that we were expanding our authority in that case. But sir, questions have been raised about what we do with plans and what is included and how that can be implemented. We are working through those issues with the State. But all EPA is doing here is regulating pollution from sources that we regulate under appropriate sections.

Senator INHOFE. You are proposing a rule, I am sorry to interrupt, but you are proposing a rule that you don't have authority to do and to enforce today.

Ms. MCCARTHY. No, I believe we have clear authority to do the rule as we have proposed it.

Senator INHOFE. No, I am talking about the authority you have under the current system.

Ms. MCCARTHY. I don't think we are expanding our authority with this rule, sir, no.

Senator INHOFE. Well, it appears to me that you are. But in this short period of time, let me try to get this other thing out of the way.

From what I understand, the EPA relied on an academic EIA study. I mentioned this in my opening statement, that about 6 percent of the nuclear fleet is at risk of shutting down. Then the EPA made an adjustment to the rule to help out the nuclear plants accordingly.

Now, the FERC has authority under power prices, power reliability, power transmission. The question I would ask you, did the EPA talk to anyone at FERC about the adjustment of whether the rule would actually help nuclear plants? In other words, to help these 6 percent that we have found are going to have problems.

Ms. MCCARTHY. Actually, I don't know what direct conversation EPA might have had with FERC over the nuclear facilities.

Senator INHOFE. Did you talk to FERC about these issues?

Ms. MCCARTHY. At a high level, and I know that our staff was working very closely with them and with DOE in particular in terms of our administrative actions.

Senator INHOFE. I know your staff, and there is no way you can tell me today or tell this committee what your staff was and who they talked to. But you personally did talk to someone about these issues at FERC?

Ms. MCCARTHY. We have been actually meeting with the commissioners.

Senator INHOFE. I am talking about you personally.

Ms. MCCARTHY. Yes. I have had meetings with the commissioners and with NARUC and with many of the DPUC commissioners.

Senator INHOFE. OK. On this note, I will end. Thank you very much.

Senator BOXER. Thank you so much.

So we are going to recess briefly, come back and there is zero time left on the clock. So I am going to run. When we come back, we are going to have Senator Markey open it up and then Senators Barrasso, Sessions, and if there is a Democrat that comes back we will go back and forth.

Thank you. We will take a brief respite.

[Recess.]

Senator BOXER. The committee will come to order.

I hope everybody used that break for a good purpose.

So we are now going to turn to our newest member, who I am so pleased is on our committee, Senator Ed Markey. You have 6 minutes.

Senator MARKEY. Thank you, Madam Chair.

Administrator McCarthy, just to clarify, you have the authority, is that not correct, under the Clean Air Act, to set a carbon pollution standard for power plants? Is that correct?

Ms. MCCARTHY. That is correct.

Senator MARKEY. Now, when you were developing the State targets, you looked at four different types of actions. But a State does not have to follow these exactly. A State can figure out the best way, in their assessment, to reach the carbon reduction target. Is that correct?

Ms. MCCARTHY. That is correct.

Senator MARKEY. So you have 50 States, you could have 50 different approaches?

Ms. MCCARTHY. That is right. That is what I expect. Well, we may.

Senator MARKEY. We may, we may not. But we are not in a position to tell them what to do, they have to make the decision.

Ms. MCCARTHY. That is correct.

Senator MARKEY. So they may want to have the same plan as another State. But they may not.

Let me ask you another question. A lot of times you hear from people saying, it really hurts the economy of the United States when there is a clean air law that goes on the books, that it is too dangerous to run the risk of trying to make the air cleaner to reduce the number of people who get sick, to reduce the number of people who die from dirty air. They say pretty much, the air is clean enough, don't make it any cleaner. But we are seeing this huge increase in the number of people who don't die or don't get sick because of the Clean Air Act.

So what I have over my shoulder is a chart from 1929 to today and it reflects the growth in the GDP of the United States of America that includes the 1970, the 1977 and the 1990 Clean Air Acts. And with the exception of a period around 2008, 2009, when there was a complete failure of regulation of the financial industry, we are seeing upward GDP growth.

Can you talk a little bit about that, the connection between this clean air journey that we have been on and the growth in GDP? Is there a choice that we have to make?

Ms. MCCARTHY. I think Chairman Boxer eloquently stated the kind of GDP growth we are seeing while we have been able to significantly reduce air pollution, basically it is an over 70 percent reduction in air pollution under the Clean Air Act, while our GDP has tripled. And so every time we put a new rule out, that is what we often, I am sorry, what we always see, frankly, from some small groups. But it really has never come true. And in this rule, we don't expect that this will have an impact, other than to have jobs grow, the economy to grow, the U.S. to become more stable, the U.S. to take advantage of new technologies, innovation and investments that will make us stronger over time.

Senator MARKEY. So I just would like to say that, and Senator Whitehouse is part of this Regional Greenhouse Gas Initiative, we have been in this plan in Massachusetts for the last six or 7 years. Something quite remarkable has now happened. Massachusetts is now fourth in solar deployment in the United States. We are kind

of not the perfectly sunny State. We are more like the perfect storm State. But we have moved forward on that front.

We have now created 80,000 clean energy jobs in Massachusetts. We are going to add another 10,000 this year, bringing it up to 90,000. And while nationally electricity rates have gone up 13 percent over the last 6 years, they have actually gone down in Massachusetts by 6 percent, even as we have had a system that is not too dissimilar from the one that you are now propounding for the whole Country. And we have seen a 23 percent expansion in the Massachusetts economy while we have had a cap and trade system in place in Massachusetts.

So I just think it is important for people to understand that the model is already there. It can be made to work. It is flexible, but it does in fact have a lot of evidence that shows that it can be done.

Now, I understand that some States have already surpassed the renewable energy production levels built into the 2030 State targets. Are you considering building more ambition into some of the State targets, where States can or are already going further than the levels assumed in the proposed rules?

Ms. MCCARTHY. Senator, we are looking at all comments that we receive. We have a very long comment period, 120 days. We are looking forwarding to four public hearings next week. So we will be certainly listening to those and making appropriate changes one way or the other.

Senator MARKEY. And again, following on the Massachusetts model, isn't it very possible that the proposed rules that you are considering could wind up lowering electricity rates for people all across the Country? I think that is kind of contradictory to the way some people think about the issue. But we have seen in Massachusetts it has happened. Talk about nationally what you could expect to be seen by consumers.

Ms. MCCARTHY. What we are projecting is that consumers will see a lowering of their energy bills. That is because we are getting waste out of the system. And because that is the cheapest most effective way to get these reductions, is to become more efficient, it makes the delivery efficient.

Senator MARKEY. In Massachusetts, we have a funny accent and we just say that is working smarter, not harder. So explain the efficiency angle in terms of what you are giving the States the flexibility to implement.

Senator BOXER. Do this as fast as you can, with your accent.

[Laughter.]

Ms. MCCARTHY. There are two ways to get reductions at fossil fuel facilities in terms of the pollution they emit for carbon. You can run them less or you can make them more efficient when they run. Both of those are part of the building blocks here.

So you can actually do that by increasing efficiency at the facility, but you can also do that by providing consumers, and many low-income consumers, support for new building codes, weatherizing houses, more efficient appliances that they can use. When those things happen, their dollars go down in terms of how much they need to spend every month on their electric bill.

Senator MARKEY. I think your plan is smart, it is effective, and it is ultimately going to be cost-effective. Thank you.

Senator BOXER. OK. We are going to turn to Senator Barrasso.

Senator BARRASSO. Thank you very much, Madam Chairman.

Ms. McCarthy, why did you let high-powered Washington lobbyists with the Natural Resources Defense Council reach into the EPA and essentially write your climate change rules for you?

Ms. MCCARTHY. I did not.

Senator BARRASSO. Well, not according to the NRDC. They had a blog on July 8th, and Madam Chair, I would like to have this introduced into the record. It is by the NRDC, written by one of the lobbyists involved in crafting the rules, who stated, "The New York Times ran a very nice article yesterday about the NRDC's part in developing an innovative proposal for curbing carbon pollution for America's 1,600 fossil fuel-fired electric power plants." And then they go on to say, "We are proud to have played a role." So they are proud of what they wrote.

Let me ask you another question. Are you going to attend the U.N. Climate Change Conference in Paris, 2015, as your predecessor did, Lisa Jackson, when she attended the Climate Change Conference in 2009?

Ms. MCCARTHY. I have not made a decision on that, Senator.

Senator BARRASSO. Well, a key part of the President's climate change strategy is to have us believe that he and his environmental and diplomatic all-star team can arrive in Paris in 2015 at the U.N. Climate Change Conference and convince the world to follow his lead. His whole plan hinges on President Obama's foreign policy prowess.

Well, his foreign policy record is a series of empty threats, of pivots, of resets, miscalculations, lead from behind failures in places like Syria, Russia, Ukraine, Iran, Libya and Iraq. After all those missteps, he wants us to believe that in 2015, he and his team can demand that China and India would stop burning fossil fuels.

Even if the President was able to reach an agreement like the Kyoto Treaty in the 1990's, it would still have to be ratified here in the Senate. The Kyoto Treaty overwhelmingly failed in the Senate. So if the President and his team of officials from EPA and the State Department can't deliver in Paris and subsequently in the Senate, we are going to be left with his domestic climate action plan which includes your rules for new and existing coal-fired power plants.

According to Secretary of State John Kerry in a column that he wrote in the Financial Times last month, he said "Even as we strive to do better, we recognize that no country can solve this problem alone." He said "Even if the U.S. somehow eliminated all our domestic greenhouse gas emissions, it still would not be enough. The rest of the world," he said, "is spewing too much carbon pollution."

So that means that the President's climate action plan, which includes the EPA's new proposed rules, on their own, do not reduce global temperatures or prevent any of the serious impacts that are predicted by the U.N. It can't make a dent.

So the question is, can you guarantee success in Paris? And if not, aren't these climate change policies all pain for America and the citizens of this Country and little gain globally?

Ms. MCCARTHY. Sir, what I know about this rule is that it will leave the United States in 2030 with a more efficient and a cleaner energy supply system, and more jobs in clean energy, which are the jobs of the future. So no matter what happens internationally, this is of significant benefit to the United States in terms of those kids in the audience who want to breathe healthy air and don't want their kids to get sick.

Senator BARRASSO. So you admit that it has no impact at all on global climate.

Ms. MCCARTHY. It will have a significant impact in the tone and tenor of the discussion.

Senator BARRASSO. Well, no impact on global climate, though, you admit that. You do. You never said anything about how this will impact global climate.

The Chair. Just a moment. Could you freeze for a moment? Freeze the clock. I don't think we should be putting words in anybody's mouth. She never said what you said she said. So can you just refine what you said? In other words, you take from her response something that she didn't say what you said. It is just not right.

Senator BARRASSO. Thank you, Madam Chairman.

I take from your response and from the Secretary of State's comments that no matter, that these proposals that you are putting forth will have no impact on global climate as a result of the failure of others to cooperate as the Secretary of State has stated.

This can't be some rich person's gamble where you make a bad bet. This has a real impact on people. When we are asking coal miners, seniors on fixed incomes, families and children who suffer higher electric bills and the unemployed to make this expensive bet that you are putting forward, and I just have a lot of problems with doing that to people around the Country, because of some rich lobbyists and powerful layers in Washington who are now reaching into the EPA to write their regulations.

Countries around the world are already abandoning anti-fossil fuel policies because of the need for affordable energy. We are seeing it in Australia, their parliament just repealed their carbon tax. The Associated Press last week quotes the Australian prime minister who says, "a useless, destructive tax, which damaged jobs, which hurt families, cost of living and which didn't actually help the environment."

Why aren't we following his lead?

Ms. MCCARTHY. Senator, climate inaction is what threatens our seniors and our kids. That is what is threatening our communities today and that is what is threatening the viability of the planet in the future. What I am responding to is EPA, that is my job.

Senator BARRASSO. Germany is going to build ten new coal-fired power plants.

Senator BOXER. If you want to stay for another round of questions, you are welcome to. Please stay if you want.

Senator BARRASSO. Thank you, Madam Chair.

Senator BOXER. I would like to ask unanimous consent to place into the record two documents. One is a poll just recently taken that shows that 70 percent of the people support your plan. So not-

withstanding the fact that other Senators say that they are defending the people, you are defending the people, in my opinion.

Second, I also want to put in the statement made by William Ruckelshaus, who appeared before this committee at the suggestion of Senator Whitehouse, who worked for Presidents Nixon and Reagan: "We like to speak of American exceptionalism. If we want to be truly exceptional, then we should begin the difficult task of leading the world away from the unacceptable effects of our increasing appetites for fossil fuel before it is too late."

I would like these two to go back to back with Senator Barrasso's, if there is no objection.

[The referenced information follows:]

The Washington Post

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The Fix

A huge majority of Americans support regulating carbon from power plants. And they're even willing to pay for it.

By Scott Clement and Peyton M. Craighill June 2

A lopsided and bipartisan majority of Americans support federal limits on greenhouse gas emissions, according to a new Washington Post-ABC News poll that also finds most are willing to stomach a higher energy bill to pay for it.

Matt Brown/Associated Press - Smoke rises from the Colstrip Steam Electric Station, a coal burning power plant in in Colstrip, Mont. On Tuesday, the Supreme Court handed the Obama administration an important victory in its effort to reduce power plant pollution that contributes to unhealthy air in neighboring states.

Fully 70 percent say the federal government should require limits to greenhouse gases from existing power plants, the focus of a new rule announced Monday by the

Environmental Protection Agency. An identical 70 percent supports requiring states to limit the amount of

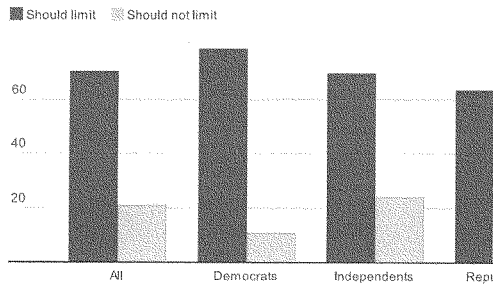
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greenhouse gas emissions within their borders. (Read everything you need to know about the EPA's proposed rules).

Democrats and Republicans are in rare agreement on the issue. Fifty-seven percent of Republicans, 76 percent among independents and 79 percent of Democrats support state-level limits on greenhouse gas emissions. Strong tea party supporters are most resistant to limits on emissions by states and power plants; 50 percent say the federal government should impose caps, while 45 percent say they should not.

Bipartisan support for power plant regulations

Do you think the federal government should or should not limit the release of greenhouse gases from existing power plants in an effort to reduce global warming?



Created with [Datawrapper](#)

Source: [Washington Post, ABC News's poll](#) [Get the data](#)

The cross-party agreement extends to a willingness to pay for such limits with higher energy bills, a flashpoint for debate and a key area of uncertainty in new regulations. Asked whether Washington should still go forward with limits if they "significantly lowered greenhouse gases but raised your monthly energy expenses by 20 dollars a month," 63 percent of respondents say yes, including 51

percent of Republicans, 64 percent of independents and 71 percent of Democrats.

Americans living in coal-heavy states are supportive of limiting greenhouse gas emissions in the poll, even as their states will be forced to make bigger adjustments to meet the EPA's new emissions targets. Among those in states where a majority of electricity is produced by burning coal, 69 percent say the government should place limits on greenhouse gas emissions. Support is a similar 71 percent in states where less than half of electricity comes from coal.*

The overall results are closely in line with Post-ABC polling since 2009, where between 65 and 75 percent have supported limits on greenhouse gases from power plants. In the new survey, half of respondents were asked about direct limits on power plants while half were asked about new regulations placing the onus for emissions limits on states. In each phrasing 70 percent supported federal government limits on greenhouse gas emissions.

Wide support for greenhouse gas emissions parallels a

broad concerns over the impact of global warming. Nearly seven in 10 say "global warming, also known as climate change" is a serious problem facing the country, with 57 percent calling it "very serious." Three quarters of Democrats say global warming is a very serious problem, compared with just 33 percent of Republicans.

The Post-ABC poll was conducted May 29 to June 1 among a random national sample of 1,002 adults, including users of conventional and cellular phones. Results from the full survey have a margin of error of plus or minus 3.5 percentage points.

*States where coal represents the majority of electricity consumed: West Virginia, Kentucky, Wyoming, Indiana, Missouri, North Dakota, Utah, Ohio, Wisconsin, Nebraska, Kansas, New Mexico, Maryland, Michigan, Colorado, Iowa, Tennessee, Arkansas, Montana. The sample size for respondents in these states is 280, carrying a margin of error of seven percentage points. Data on state consumption from the Energy Information Agency.

U.S. Senate
Environment and Public Works Committee
Subcommittee on Clean Air and Nuclear Safety
HEARING ON CLIMATE CHANGE: THE NEED TO ACT NOW
WEDNESDAY, JUNE 18, 2014

Excerpt from Hearing Transcript (at page 55)

WILLIAM D. RUCKELSHAUS,
STRATEGIC ADVISOR MADRONA GROUP
FORMER U.S. EPA ADMINISTRATOR
(Served under Presidents Nixon and Reagan)

America Needs to Lead on Climate Change

"We also know that if America does not get serious about our responsibility to deal with this problem, nothing much will happen in the rest of the world. No action is a choice. It is a choice that means we leave to chance the kind of future we want and opt out of the solution to a problem that we are a big part of.

We like to speak of American exceptionalism. If we want to be truly exceptional, then we should begin the difficult task of leading the world away from the unacceptable effects of our increasing appetites for fossil fuels before it is too late."

Senator BOXER. Now, we are going to turn to Senator Gillibrand, who was not here. She gets 6 minutes, and as a Republican comes we will work back and forth. Then we will turn, I will close, so I will withhold and we will go to Senator Whitehouse and Senator Markey after Senator Gillibrand.

Senator GILLIBRAND. Thank you, Madam Chairwoman. I am so grateful for Administrator McCarthy being here. I am grateful for your leadership. I want to thank the Chairwoman for holding this hearing.

Climate change, as everyone knows, is one of the biggest crises we face. Having watched the destruction after SuperStorm Sandy, it is not only extremely costly, but people are losing their lives because we are not acting fast enough or bold enough. So we have to do more, we have to do better. The costs of inaction are enormous. We can continue or try to continue to pay for disaster after disaster, or we can make really smart steps to reduce carbon pollution and foster innovation for cleaner energy sources and more advanced technology.

So I think there is a picture of success here that we have to grab hold on and achieve it. I think with your leadership, we will achieve that goal.

New York State is a member of the Regional Greenhouse Gas Initiative. I know you are familiar with it and have testified about it. Today the regional greenhouse gas emissions are 40 percent lower than in 2005. And it is projected to produce \$1.6 billion in net economic benefit, which I wish my colleague was still here to hear these numbers. This is an economic engine; \$1.1 billion in electricity savings; 16,000 additional jobs per year; and \$765 million retained in local economies due to reduced demand for fossil fuels. That is a huge success.

So from your experience how can other States use the RGGI example to implement a successful program to cut greenhouse gas emissions? And can other States and regions expect the same type of economic benefits that we have seen in New York as a result of our RGGI program?

Ms. MCCARTHY. I am incredibly proud of the work of the Regional Greenhouse Gas Initiative in all those States. I think it was specifically designed to take the waste out of the system and to continue to grow the economy. Those numbers are great, Senator, thanks.

The individual States can develop their own plans or they can certainly join other regional approaches, like the Regional Greenhouse Gas Initiative. We have provided information as to why that is inexpensive, why that is a good thing to do and provide an opportunity for them to have additional time if that is what they so choose.

But I think the most important thing for the leadership States moving out in front is that they have shown us that here are cost-effective, practical ways in which we can make this work significantly to address climate change and to grow the economy, not just not hurt it, but actually provide an impetus for growth. That has been the basis of this, our determination of best system of emission reduction adequately demonstrated. The leadership States frankly,

not just the RGGI States, but all across the United States we are seeing States show tremendous leadership.

That is what we are building on. We just want every State to come to the table and look at the same things and see how they can design it with the same idea of success in mind.

Senator GILLIBRAND. I have read that there were challenges when other regions of the world have tried to do this. There was fraud that undermined the results. Can you talk about why we are successful and they weren't? How do we expand this more across all States? Should we ever have a national RGGI?

Ms. MCCARTHY. I think we learned from some of those lessons really directly. And I think we also learned from a lot of the work that Congress did in trying to design a cap and trade program for the U.S. Those are things that you learn from and you don't repeat mistakes. So I think we very well understood how we could make sure that the reductions we were trying to achieve were verifiable, accountable and how we could do it in a way that provided the flexibility to put investments in things that were actually going to be beneficial economically, like energy efficiency.

One of the best designs of RGGI is that money was actually going to support the kind of programs that are going to lower costs for individual consumers.

Senator GILLIBRAND. I think our energy cost-savings are amazing. How can you in your position urge other Governors, other States, other regions to really try to adopt this and be successful as well? What tools do you have? What help do you need from us? How do we expand this?

Ms. MCCARTHY. I think we are just trying to make sure that there is a table set for every State to look at these issues and to work together. I don't think EPA is trying at this point, nor should we, tell States how they should meet these goals. We are trying to provide them an opportunity get as much technical information as they can, to look at all the options available to them, if they want our help doing that. And we have been having meetings that bring energy and environmental regulators together in every State, so they can understand how they can design a strategy that works for them.

That is the most important thing for me, is that they roll up their sleeves and start working. Because action right now is essential.

Senator GILLIBRAND. We talked about all the cost savings. There is also obviously the health benefits that we can expect from these types of reforms. Can you talk a little bit about some of the health benefits we can expect from the implementation of the new clean power plant proposed rule?

Ms. MCCARTHY. I certainly can. The health benefits in this rule are actually quite large. From reducing carbon pollution you actually have an opportunity to keep temperatures from rising, more ozone from being formed, which always results in more asthma attacks. But this rule also is going to be directly reducing particulate matter emissions, NO_x emissions SO_x emissions, mercury emissions, as we look at the RIA that was developed.

And just to name a few things, we are actually avoiding 2,700 premature deaths in 2030, up to 6,600 premature deaths. We are

talking already just in 2020 reducing more than 100,000 asthma attacks in our kids. And in the U.S., one out of ten kids faces asthma. We worry about low income, we worry about minorities, we worry about those in the front line of the changing climate, those numbers matter.

Senator GILLIBRAND. Thank you, Madam Chair.

Senator BOXER. Senator, thank you.

Senator SESSIONS.

Senator SESSIONS. Thank you. Well, Ms. McCarthy, the Supreme Court statement that when an agency, EPA, claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, we typically greet its announcement with a measure of skepticism. So what our American people need to know is that you have not been given explicit statutory authority power to do what you are doing. You achieved it by, I guess, a five to four ruling some years ago by the Supreme Court. And it ought to be viewed with skepticism.

The American people run this Country. You don't run this Country. EPA does not run this Country. You are accountable to the people for the best interests of this entire Nation. The Congress has never approved this, and that is one of the problems you face.

EPA has proposed an emissions target for Alabama which would require a 27 percent reduction in the rate of CO₂ emissions relative to 2012 levels. It reaches a target by assuming that it is technically feasible for Alabama to retire 10 million megawatt hours of coal-fired generation capacity which is significant, increase natural gas generation by an equivalent amount, generate over 14 million megawatt hours from renewable as well as preserve existing nuclear capacity, existing, not an increase.

So first, you have been talking about consulting. Did EPA consult with the State of Alabama about those assumptions, achievable assumptions?

Ms. MCCARTHY. We have been working with both the energy and environmental regulators in every State. I cannot name you specifically whether or not we have had individual meetings with the folks from Alabama. But I can certainly check and get back with you.

Senator SESSIONS. I don't think you have been dealing that accurately or completely with them on these assumptions, these abilities. You are talking about a huge, 14 million megawatt hours from renewable.

Ms. MCCARTHY. Senator, I am not sure about those numbers. So I am more than happy to go through them with you.

Senator SESSIONS. Would you promptly respond to an inquiry for a correction to me on those?

Ms. MCCARTHY. Of course I will, sure.

Senator SESSIONS. Thank you. Now, Section 111(d) of the proposed rule that has been debated here references extreme weather six times at least, and cites claims about projections of increased severity of hurricanes and tornadoes. Do you have any data that you can show this committee to establish that we can expect an increased number and severity of hurricanes and tornadoes?

Ms. MCCARTHY. I am well aware that the new national assessment indicates that we should be expecting more intense storms,

more heavy precipitation. There is, I don't believe any assumption made about the frequency of hurricanes at this point. But there is certainly the severity and intensity of those storms is expected to increase.

Senator SESSIONS. Do you know how many days it has been since the United States has had a Category 3 hurricane?

Ms. MCCARTHY. I do not have that information.

Senator SESSIONS. It is 3,200 days. That is almost 10 years. We haven't had a Category 3 hurricane. I remember when Frederick hit my town of Mobile. Ten years before that, we had Camille, which was a 5. Frederick I think was a 3. We are not having increases, the data is pretty clear on that.

So I just want to tell you, you are asking us to alter our policies economically at great cost, and one of the bases of that charge is the increased storms. And we are not seeing them, is all I am saying. It may happen, I don't know. But I don't believe you have a scientific basis, and I would like to see any science you have to justify that position.

Finally, you suggest that by 2030, you predict, in your written statement here, "Average electric bills for American families will be 8 percent cheaper." As I understand it, you assume that we will have a 1.5 percent energy efficiency increase every single year during that decade, 1.5 percent, whereas the average today, I understand, is .5 percent.

Are you confident? How can you have confidence that that would occur, that we would have an actual reduction in costs of electricity for Americans?

Ms. MCCARTHY. Sir, we feel pretty confident that the data indicates that energy efficiency is one of the least expensive, most effective ways of reducing carbon pollution, that States will take advantage of that.

Senator SESSIONS. I totally agree that energy efficiency is a bipartisan issue that we can work on together with you. I would just say that if you maintain that and don't do the other things, we would have a much lower cost of electricity.

Senator BOXER. Thank you, Senator.

Senator Whitehouse.

Senator WHITEHOUSE. Thank you very much, Madam Chair.

While my friend Senator Sessions was speaking, I pulled up a story from the Birmingham News. It is 2 years old, it is from August 2012. At the time, it was about a guy named Bart Slossen in Birmingham who was one of only 27 residential customers of Alabama Power who were selling solar electricity back to the grid. He "wondered why there is no photovoltaic presence in Alabama and it is full of sun," he said. The story goes on, across the Country and across the globe, solar energy is spreading, supported by falling prices for equipment, environmental sensitivity and generous incentives from governments and utilities. Drive across the border to Tennessee and solar arrays are sprouting the fields.

Florida, the sunshine State, is a national leader in the production of power from the sun. In Georgia, the first large scale solar development came online this summer, with planned future projects expected to boost that State's generation to 50 megawatts

by 2015. Alabama, on the other hand, finishes at or near the bottom in solar surveys.

So it would seem that there might be some potential there.

Senator SESSIONS. I thank the Senator. It would be great if we could make solar work, but the experts tell us that because of our cloud cover we are not nearly as efficient as most of the States farther west to have clear sunshine, and it is not very effective.

Senator WHITEHOUSE. Well, we will certainly see about that. And certainly the costs are coming down. My concern is that when the alternative to solar is to burn coal, there are costs to that that the rest of us have to bear that aren't in that decision anywhere. If you are an accountant, and you are doing the books for a family or for a business, you have to look at two sides of the ledger. You look at what the costs are and you look at what the income is and then you get to bottom line.

A lot of what my colleagues have been saying during the course of this hearing, I believe, has only looked at one side of the ledger. Specifically, that narrow side of the ledger that relates to the costs to the coal industry, as if our highest and most important goal in this exercise was to make sure that coal plants kept running.

I think that EPA has actually tried to look at both sides of the ledger, looked at costs, and looked at benefits. On a net basis, when you actually do accounting for the cost of this, looking at both sides of the ledger, not just a one-sided view, what do you get as your net assessment of whether this is going to be good or bad for our economy and for our people?

Ms. MCCARTHY. In 2030, it is a net benefit of somewhere between \$48 billion and \$84 billion.

Senator WHITEHOUSE. Between \$48 billion with a B and \$84 billion?

Ms. MCCARTHY. That is correct.

Senator WHITEHOUSE. Per year, or summed up for that time?

Ms. MCCARTHY. That is per year.

Senator WHITEHOUSE. So in that year, it will be a net. So in that time period, presumably it will have added up considerably more than that over time.

Ms. MCCARTHY. Oh, wait a minute. I will double check, but I believe that is the case.

Senator WHITEHOUSE. But that would be the minimum, obviously.

Ms. MCCARTHY. Yes.

Senator WHITEHOUSE. The number gets a lot bigger if you are doing that annually than if that is the sum.

Ms. MCCARTHY. That is right.

Senator WHITEHOUSE. So the bottom line is that there is a positive net benefit?

Ms. MCCARTHY. Very much so, yes.

Senator WHITEHOUSE. And I just want to say, I appreciate very much the concern of my colleagues here. I know that Senator Barrasso is representing the State of Wyoming. I know that the State of Wyoming has a very significant coal economy. I believe that a billion dollars of the revenues of the State of Wyoming come into its coffers from its fossil fuel industry. So if there is going to be an interruption of that, then Senator Barrasso has every reason

to be concerned and he has every reason to expect the rest of us to listen to his concerns and to try to work with him to see what we can do to help with those concerns.

What I can't have is to have a dialog in which Wyoming gets its concerns ventilated but has no interest whatsoever in what is happening in Rhode Island, where we have kids with ozone, we have very serious asthma problems, where we have 10 inches of sea level rise, where our winter flounder fishery is virtually gone, where our prospects for having a ski industry are evaporating, such as it is. There is Yawgoo Valley, if you want to come to Rhode Island and ski, it is not much, but it is there and we would like to keep it. But the evidence appears to be, from the estimates that we have seen, that Connecticut and New York and Massachusetts are going to lose theirs. So if they lose theirs, it is unlikely Rhode Island is going to be a little sanctuary of snow down there south of them.

So we have real costs on our side, and I hope that, Madam Administrator, you will bear in mind that there are costs on both sides of this ledger. I contend that the costs on our side of the ledger actually outweigh the costs of the other side of the ledger in pure economic value by a lot.

Ms. MCCARTHY. Those were annual costs, and they are pretty staggering.

Senator WHITEHOUSE. Those were annual costs.

Ms. MCCARTHY. And the benefits associated, the net benefits here are tremendous.

Senator WHITEHOUSE. Tens of billions of dollars a year.

Ms. MCCARTHY. But I don't think that they by far and away capture all the benefits that we are going to achieve by addressing and stepping up on climate.

Senator WHITEHOUSE. So, Madam Chair, if there is that kind of benefit, it would seem to be reasonable that we could find a way, through the politics of this body, to deliver some of that benefit back to the States of West Virginia and Wyoming, to balance what is going on here. But they can't do that if we pretend that this problem isn't real. They can't do that if they pretend that the other side of the ledger doesn't exist. We can't do that if they continue this pretense that coal isn't harming people all across the Country as well as benefiting people in their States.

Senator BOXER. Senator, thank you so much for your contribution.

I see Senator Sanders here. I am going to do my round, then I am going to turn the gavel over to Senator Sanders to take as much as he wants and then close it down.

Now, I will say, Administrator McCarthy, that Senator Sessions told you that you don't run America. Do you think you run America?

Ms. MCCARTHY. I am not taking the blame, no.

[Laughter.]

Senator BOXER. Let the record show that you don't think that you run America.

Are you implementing the Clean Air Act?

Ms. MCCARTHY. Yes.

Senator BOXER. Was there an endangerment finding that said that too much carbon pollution is a danger?

Ms. MCCARTHY. Yes.

Senator BOXER. Can you summarize for us the major dangers of carbon pollution?

Ms. MCCARTHY. The major dangers identified in the endangerment finding were the dangers related to increased temperature, increased floods, increased droughts, disease that is related to this, heat strokes. There are a number of impacts associated with a change in climate.

Senator BOXER. Is it your responsibility to protect the Clean Air Act and to protect clean air, clean water, safe drinking water? Isn't that what you swore that you would do when you took this job?

Ms. MCCARTHY. Yes, I did, and I meant it.

Senator BOXER. I know you meant it. I just want to say, colleagues, for all the bluster on the other side about how what Administrator McCarthy is doing is a danger to people, people don't believe it. Seventy percent of the people side with the EPA.

And let me just read the groups that support EPA carbon pollution standards. What I want to say to everyone in the audience, wherever they come out on this, I want you to think when I mention these names, who do these people really fight for?

The Alliance of Nurses for Healthy Environments, the American Academy of Pediatrics, the American Lung Association, the American Medical Association, the American Public Health Association, the American Thoracic Society, the Asthma and Allergy Foundation of America, Chicago Physicians for Social Responsibility, the Cleveland Clinic Asthma Center, Health Care Without Harm, National Association of County and City Health Officials, National Hispanic Medical Association, National Medical Association, National Nurses United, Trust for America's Health. I ask that unanimous consent to put this list into the record.

[The referenced information follows:]

Medical & Public Health Organizations

Supporting EPA Carbon Pollution Standards for Existing Power Plants

- **Alliance of Nurses for Healthy Environments**
- **American Academy of Pediatrics**
- **American Lung Association**
- **American Medical Association**
- **American Public Health Association**
- **American Thoracic Society**
- **Asthma and Allergy Foundation of America**
- **Chicago Physicians for Social Responsibility**
- **Cleveland Clinic Asthma Center**
- **Health Care Without Harm**
- **National Association of County and City Health Officials**
- **National Hispanic Medical Association**
- **National Medical Association**
- **National Nurses United**
- **Trust for America's Health**

Public Health Community Supports EPA Carbon Pollution Standards

American Academy of Pediatrics | Dr. James Perrin, MD, President

“As climate change accelerates, children will continue to suffer disproportionately. In fact, according to the World Health Organization, more than 80% of the current health burden due to the changing climate occurs in children younger than five years old. Children are not just little adults; they breathe faster, spend more time outside and have proportionately greater skin surface exposed to the environment, making them especially vulnerable to all environmental exposures. The regulation released today by the EPA is a welcomed and needed step to help make the air we breathe safer and cleaner for children. As the regulation takes effect, the American Academy of Pediatrics will work with the EPA to ensure the strongest possible standards to protect and promote child health.” [[Press Release](#), 6/2/2014]

American Lung Association

“EPA’s proposed limits show serious commitment to addressing one of the most serious public health challenges of our day, climate change. Scientists say that warmer temperatures can enhance the conditions for lethal air pollutants, including ozone and particle pollution. Despite steps in place to curb these pollutants, evidence shows that climate change is likely to increase the risk of unhealthy air in large parts of the United States. More pollution means more childhood asthma attacks and complications for those with lung disease, including increased risk of premature death.” [[Press Release](#), 6/2/2014]

American Medical Association | House of Delegates Resolution

“RESOLVED, That our American Medical Association submit comments to the U.S. Environmental Protection Agency during public comment period on the new proposed rule regarding existing power plant emissions to underscore the need to keep the standards strong and protective of public health.” [6/10/14, [ATS Release](#)]

American Public Health Association | Georges Benjamin, Executive Director

“The American Public Health Association applauds the U.S. Environmental Protection Agency today for proposing a 30 percent reduction by 2030 in harmful carbon emissions from existing power plants, a leading contributor to climate change. This is a critical and necessary step for ensuring greater health now and for future generations. Thanks to EPA’s proposed standards we will reduce these threats and provide all Americans with safer air, cleaner energy and a more stable climate.” [[Press Release](#), 6/2/2014]

American Thoracic Society | Tom Ferkol, MD, President

“As a pediatric pulmonologist who cares for children with severe health problems, we are beginning to recognize the health effects of global warming in our practices. The ATS strongly supports the efforts of President Obama and the EPA to reduce the harmful emissions of greenhouse gasses from power plants. Today’s rules are a step in the right direction toward mitigating climate change. What often gets lost in the discussion is that reducing carbon emissions also decreases other noxious pollutants like mercury, ozone and particulate matter. Mercury, ozone and particulate matter are known pollutants that cause

neurological damage, respiratory and cardiovascular disease. By reducing carbon pollution today, our children will enjoy the benefits of cleaner air while we address a major cause of global warming." [[Press Release](#), 6/2/2014]

Asthma and Allergy Foundation of America | Charlotte Collins, Senior Vice President of Policy and Programs

"We are excited that the US is poised to play a leading role in reducing particulate matter pollution from this source" said Charlotte W. Collins, Senior Vice President of Policy and Programs for the Asthma and Allergy Foundation of America. "Curbing carbon emissions will yield health benefits especially for those who suffer from asthma and other lung diseases. We look forward to reviewing the EPA proposal in detail". [[Press Release](#), 6/2/2014]

Chicago Physicians for Social Responsibility | Dr. Susan Buchanan, Board of Directors

"Considering the mounting evidence of air pollution's connections to heart attacks, asthma and other diseases, EPA's carbon limits mark a bold step forward for public health. We are eager to see next week's draft and remain poised to work with all stakeholders to ensure these limits are as protective and effective as possible." [[Press Release](#), 5/29/2014]

Cleveland Clinic Asthma Center | Dr. Sumita B. Khatri, Co-Director and Board Member of the American Lung Association

"Air quality does not just impact people from a theoretical standpoint—it affects our patients, our families, and us. Many are fortunate enough not to worry about how they will catch their next breath, that it is second nature and not a second thought. Children, senior citizens, and individuals with chronic lung or heart conditions are particularly at risk by being exposed to poor air quality. This announcement helps us to set priorities; any measures we can take to improve our air quality will be meaningful to all of us. We must be empowered by knowing that each of us can have a very real impact by paying attention to how our personal actions impact energy efficiency, and how our community chooses to care about the environment. These activities affect the health of those around us not just now but well into the future." [6/2/2014, [EPA List of Stakeholders](#)]

Health Care Without Harm | Gary Cohen, President

"Carbon pollution impacts communities across the country by increasing health risks like asthma and respiratory disease and by exacerbating climate change. The new carbon pollution standards, which include the first ever limits on carbon pollution from power plants, will help protect the health of our children, seniors, and families while also providing major savings in health care costs. Health Care Without Harm welcomes the Administration taking this important step to protect public health." [6/2/2014, [EPA List of Stakeholders](#)]

National Association of County and City Health Officials | Robert M. Pestronk, Executive Director

"People value unpolluted air and better health. It takes all of us and sometimes regulations to make that a reality. The nation's local health departments work every day with others to protect our communities from the health effects of air pollution, to raise awareness, and to mitigate the unhealthy effects of climate change." [[Press Release](#), 6/2/2014]

National Hispanic Medical Association

“Latino families suffer greatly when industrial carbon pollution is emitted to our air. One out of two Latinos lives in areas where air quality does not meet EPA’s public health standards. Exposure to polluted air causes long-lasting damage to our communities’ health, and those with asthma or respiratory illnesses are at greater risk. We applaud the historic announcement of standards that will limit harmful carbon emissions from power plants and we stand ready to protect our families from the destructive climate change and from the impending threat of global warming. The new standards set out by the Environmental Protection Agency are a positive step forward as we continue to ensure that the President’s Climate Action Plan is fully implemented. In addition, these new standards will not only protect the health of Hispanic communities across the country, but will ensure that future generations are protected as well.” [[Press Release](#), 6/2/2014]

National Medical Association | Michael LeNoir, MD, President

“We support President Obama’s Climate Action Plan and believe that it is imperative that we reduce carbon emissions from power plants as well as other significant sources of greenhouse gases in order to limit the health effects that we are seeing in our patients.” [[Press Release](#), 6/2/2014]

Trust for America’s Health | Jeffrey Levi, PhD, Executive Director

“TFAH is pleased that EPA is moving forward with plans to issue carbon pollution standards—which will save lives and improve the quality of life for many Americans—for existing power plants. Thanks partly to climate change and pollution, the nation is already experiencing longer allergy seasons and record temperatures. And, without urgent action to control carbon pollution, communities across the country are at-risk for further negative health effects. This proposal also marks another critical step in President Obama’s Climate Action Plan. It comes on the heels of the recently released National Climate Assessment (NCA), which was the latest in a string of important calls to action to address the serious effects climate change is having on our nation’s health. From natural disasters (floods, tropical storms and wild fires) to reduced water resources (which can harm farm production) to new insect-based infectious diseases that, previously, were only affiliated with high temperature regions, we continue to see more and more illnesses, injuries and health problems related to extreme weather events, rising temperatures and worsening air quality. We urge the Administration to finalize this proposal as well as a previously-proposed carbon standard for new power plants in a swift and timely manner.” [[Press Release](#), 6/2/2014]

Alliance of Nurses for Healthy Environments | Katie Huffling, Programs Director

“As a nurse, I applaud the EPA’s plan to cap carbon pollution from existing coal fired power plants. Carbon pollution is putting the health of all Americans at risk. We know that carbon pollution from power plants is among the leading causes of climate change, which is associated with increased rates of asthma, allergies, vector-borne diseases, and heat-related ailments and those most vulnerable among us - children, the elderly, and pregnant women - are especially susceptible. By taking steps now to reduce carbon pollution, the EPA is protecting the health of our children and future generations.” [[EPA Stakeholder List](#)]

National Nurses United

“The EPA’s new regulations are a vital step in the right direction that will save lives and begin to address in a serious way our nation’s negative contribution to the global climate crisis.”

[[ThinkProgress](#), 6/9/2014].

Senator BOXER. I think if everyone listened to this, you would say they represent the American people, the children, our families. So that is very, very key.

I also would like to note, I am sorry Senator Sessions had to leave, that Hurricane Katrina in 2005 cost taxpayers \$125 billion, and Hurricane Sandy, as Senator Sanders has said, cost \$60 billion. I think this whole Country lived through those disasters, and we want to mitigate those disasters. That is what your rule is all about.

Last, I want to make a point for my colleagues, my colleagues, I want to make a point to my colleagues. I want to make a point. This is my point. And I think this gets overlooked. And I want to, because my colleagues are so informed on this, I just think this is one other huge piece of information that is rather new to the debate.

Under this proposal, in 2030, air pollution benefits, not carbon, put that aside, the other pollution benefits will total \$62 billion per year. What does that mean? Reduction of particulate matter, 50,000 ton reduction. Reduction of sulfur dioxide, 425,000 ton reduction. Nitrogen dioxide, 410,000 reduction. This is huge.

And this speaks to the issue that Senator Whitehouse spoke to, that we can move to clean energy or cleanup the energy we have, which I believe is possible, and save our kids, save our families, save our health, premature deaths, asthma, missed work, missed school. So I want to say, Administrator McCarthy, I can't tell you how much I appreciate your taking this job as one who kind of suggested it, one of the people.

Ms. MCCARTHY. You had a little hand in it.

Senator BOXER. Well, I want to say, I knew that you would step up to the plate, that you had the experience of working across party aisles, that you really had in your heart exactly why you wanted to do this work, to help our families, and frankly, our economy and our leadership in the world. I just can't think of anyone else who could do it better. I want to say that. You proved it today.

I want to say, even though my colleagues aren't here from the Republican side, I felt they were very respectful of you, I appreciate that.

Ms. MCCARTHY. I agree.

Senator BOXER. I agree. But I also agree with Senator Whitehouse and Senator Sanders, we shouldn't be having the argument about what is as clear as can be, and I am very pleased with this hearing. I am pleased with this plan. I know my people at home support you and so do 70 percent of the American people.

With that, I am going to hand the gavel over to Senator Sanders and suggest that he sit over here and finish this hearing. If Senator Whitehouse wants another round, that is great. I need to go to a meeting and I thank everybody.

And I especially thank the young people here today, the little ones, they actually were pretty good. They were pretty good considering all the hot air all of us were putting toward them. I appreciate everybody being here, it means a lot.

Senator Sanders, the gavel is yours and the time is yours.

Senator SANDERS.

[Presiding.] Thank you very much, Senator Boxer. Thank you so much for what you are doing on this issue.

We know that Gina McCarthy does not run the world or run America, because if she did, she would not have to sit here for two and a half hours, right?

[Laughter.]

Senator SANDERS. I just want to make a few points, then give the mic over to Senator Whitehouse, if he would like it. Just two points, and I am sorry my Republican colleagues are not here.

I understand that when I was not here there was some argument, I think by the Senator from Wyoming, about how wealthy liberals have coerced you into moving forward in this direction. Now, I find that is really remarkable that one of my Republican colleagues would dare to raise the issue of campaign finance and the amount of money folks are putting into the political process.

So let me just recite a few facts for the record. According to the Center for Responsive Politics, in 2013 the oil, gas and coal industries invested at least \$170 million in lobbying the Federal Government. According to the Center for Responsive Politics, in the 2012 election cycle, the same industries spent more than \$93 million in recorded campaign contributions, an enormous number, which is itself dwarfed by the amount of money invested in dark money SuperPAC spending.

Then we go to another level, and it really is hard for me to understand these guys would raise these issues, we have the Koch brothers, who are today as a family worth \$80 billion, who have spent hundreds of millions of dollars on political campaigns and setting up think tanks, and in fact are doing that in this election as well. According to the Washington Post and the Center for Responsive Politics, the Koch brothers, so where do the Koch brothers get their money? They are a fossil fuel industry. And they have invested \$407 million, according to the Washington Post, supporting conservative fossil-friendly candidates in the 2012 election.

So is there money coming into the political process from wealthy liberals? The answer is yes. But that money is clearly dwarfed by the amount of money coming in from the fossil fuel industry.

I would also add that I find it remarkable that some of my Republican colleagues in this debate have expressed a deep concern about the needs of low-income people and the elderly. I would remind the people of this Country that these are the same folks whose compassion and love of low-income people prevents them from working to raise the minimum wage so people can have a living wage, allows them to make massive cuts in the LIHEAP program, which provides fuel assistance to low-income people. Many of them are on record as making massive cuts in Medicaid, Medicare, trying to end social security, privatize social security. So I think that their concerns today about the needs of low-income people might be held up to some question.

Senator Whitehouse, did you want to add anything to that?

Senator WHITEHOUSE. One last question for the Administrator. I take the position that the costs of this regulation are dwarfed by the benefits. I think that is EPA's judgment as well. I also take the position that it is not fair for people to only look at one side of the ledger in evaluating this legislation. They can't just look at the in-

terests of the coal businesses, they really need to look at America more broadly. There are lots of us who are on the other side of that equation for whom coal really is a harm. And we can work in rational ways to try and balance that. But please don't pretend that my side doesn't exist.

The third is that there is legitimate concern and then there is concern that is for rhetorical purposes. There is probably a little bit of a blend between the two. But if we look at the history that EPA has seen of industry reaction to proposed environmental regulations, all four Republican former EPA Administrators who testified in those very seats, Ms. McCarthy, indicated that over and over, the industry concerns were exaggerated. They did not prove true in the actual fact. Whether that was because they were exaggerated for rhetorical purposes at the beginning or whether that was because innovation was brought to bear to reduce costs, both can be true.

But let me ask you, you have been in this business for a long time, at the State level as well as the Federal level. You have worked for Republican Governors before. What is your view on what track record has been of industry projections and warnings about the costs and consequences of environmental regulation by EPA?

Ms. MCCARTHY. History tells us that they always exaggerate the costs. They always project environmental benefits as somehow being contrary to economic growth and goals. It just simply hasn't come true. Never.

So I think one of the points that we haven't talked about a little bit, Senator, that you hit on, is one of the great benefits of looking at setting a course for climate change that is long-term and flexible is that what we are actually sending is a tremendous investment signal in what the United States values and cares about. It will unleash innovation and investment money.

This is not about a scrubber at the end of a pipe or a smokestack. This is really about investing in things people care about, investing in things that people will make money on.

One of the great things, frankly, about regulating is seeing how the regulated community grumbles during the process but in the end figures out how to make money, the great old American way. You will see this. This proposal is designed to be moderate in its ask, based on what is practical and affordable.

But the vision behind it, the direction that it is going to take, I think we will get significantly more benefit than we are requiring. Because we are asking for the things that the American public actually wants to spend money on: less waste, cleaner energy, jobs, economic growth. That is what this is all about. As you can tell, I am pretty proud of it as a proposal. I know we will listen to folks.

But in the end, this is going to be something I am hoping we will all be proud of.

Senator SANDERS. If I could pick up on Senator Whitehouse's question, Administrator McCarthy. What I hear you saying is that you believe the United States could be a leader in the world in new technologies, which help us reduce greenhouse gas emissions, and in the process see significant economic development.

Ms. MCCARTHY. That is correct.

Senator SANDERS. All right. I will tell you just in one area, in Vermont we have put some money, Federal money into weatherization. Do you know what we have done? We have reduced fuel bills for people, low-income people, cutting their fuel use by I think 32 percent, cut greenhouse gas emissions.

Do you know what else we have done? We have created jobs in the area. And I suspect your point is that once industry gets moving in terms of sustainable energies, et cetera, we can be a leader in providing that technology, not only in the United States, but all over the world, and in the processing getting worldwide companies moving as well. Is that kind of what you are saying?

Ms. MCCARTHY. That is what I meant to say, yes.

Senator SANDERS. You said it better than I did. All right.

My very last question, and I will give it back to Senator Whitehouse, again, the issue of money in politics has been raised at this hearing with the suggestion that environmental folks are pouring huge sums of money in and I would argue that their money is being dwarfed by the industry. Do you have any thoughts on that, the amounts of money we are seeing in lobbying? I know campaign contributions is not your issue. But in lobbying that comes from the big energy companies.

Ms. MCCARTHY. Senator, let me just hit the issue directly, because I know it had to do with a New York Times article which has been given surprising credibility. But I think, I know how hard the great staff at EPA worked to design this role, basically from whole cloth, listening to States and utilities and energy regulators and environmental regulators and stakeholders from all walks of life.

I am extraordinarily proud of the work they put into it. I know they didn't sleep for virtually any night well for months. We worked weekends. I can tell you I had 2 hours of meetings on this rule alone every week for the past, I don't know how many months. And I think it is a discredit to them to suggest that somehow this was designed miraculously by one group, many months ago, and we just had it in our pocket ready to unveil.

This was a result of hard work, a result of lots of listening and a result of moving 40 years of history in that agency and getting the science right, understanding the law and doing the work we need to do. That is what this is all about.

Senator SANDERS. Senator Whitehouse.

Senator WHITEHOUSE. And the result of a process in which the electric utility, the coal industry, the fossil fuel industry, the chamber of commerce and others also had their input, correct?

Ms. MCCARTHY. I will also guarantee you that I have met many more times with utilities than I have the NRDC.

Senator WHITEHOUSE. Thank you. By way of a brief closing statement, I just want to thank Senator Sanders for raising this issue. I do a climate speech every week on the Senate floor, at least every week that we are in session. This week I am going to be talking about precisely the point that you raised.

If you look back at our history in this body, there has been a very constant, strong heartbeat of bipartisan activity on climate. Many of our colleagues who are still here have had proud histories of en-

gagement with significant bipartisan climate legislation. And after 2010, you see that heartbeat of bipartisan activity flat line.

If you look at what happened in early 2010 that might explain why it suddenly ended, you find a Supreme Court decision called Citizens United that allowed unlimited corporate money, unlimited billionaire money to bombard our politics. What people often think about that is that oh, they all came in and they beat up the Democrats on behalf of the Republicans and this is a partisan thing.

But I have heard over and over from Republican colleagues, what are you complaining about? They are spending more money against us than they are spending against you. And there have been times, I believe, when actually the unaccountable anonymous dark money that Citizens United unleashed was being spent more in Republican primaries and against Republicans than it was against Democrats.

That I think has suppressed debate and has a corrosive effect on our politics and has ended what was for many, many years a proud bipartisan tradition. So I am very glad that Senator Sanders raised that, and I thank Administrator McCarthy for being here and for all of her leadership and courage.

Senator SANDERS. Thank you, Senator Whitehouse. Administrator McCarthy, thank you very much. And with that, we adjourn the hearing.

[Whereupon, at 12:29 p.m., the hearing was adjourned.]

[Additional material submitted for the record follows.]

STATEMENT OF HON. TOM UDALL, U.S. SENATOR
FROM THE STATE OF NEW MEXICO

We've seen the impacts of global warming firsthand in New Mexico. Prolonged droughts, more frequent wildfires and increased threats to forests and agriculture present some of the biggest economic and public health challenges we face in our State and nation. And when we're faced with problems, we roll up our sleeves and solve them.

For many years, I've devoted my career in public service to tackling the problem of global warming. I've introduced bipartisan legislation to create a flexible market-based system that provides industry with predictability and stability, and turns the trend of increasing emissions downward. I've worked with many Members of Congress across the aisle to come up with legislative solutions. But many other Members of Congress would rather just pretend the problem doesn't exist.

The President and the Administration have refused to let this political reality affect our environmental reality. We've already wasted too much time already and the country wants to move forward with sensible solutions that safeguard our environment and advance our technological solutions. The proposed clean power plan is designed to help provide what every New Mexican wants for our children: clean air, fresh water and good health. And it allows each State to shape our own path to lower carbon emissions using the resources and tools available to them.

I've always said we need a 'do it all, do it right' strategy to balance traditional energy with new energy sources. Let's seize this opportunity to spur innovation and job creation, strengthen industries New Mexico does well, like solar, wind and biofuels, and build a clean energy future for the generations to come.



Published on *DeSmogBlog* (<http://www.desmogblog.com>)

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Oregon Petition

Oregon Petition

The infamous “Oregon Petition”

The Oregon Petition has been used by climate change skeptics ^[1] as proof ^[2] that there is no scientific consensus, however they fail to note the controversy surrounding the petition itself.

In April 1998, Art Robinson ^[3] and his organization the Oregon Institute of Science and Medicine ^[3] along with the Exxon-backed ^[4] George C. Marshall Institute ^[5], co-published the infamous “Oregon Petition” claiming to have collected 17,000 signatories to a document arguing against the realities of global warming.

Along with the petition there was a cover letter from Dr. Fred Seitz ^[6], a well-known climate change skeptic (and tobacco scientist), who over 30 years ago was the president of the National Academy of Science. Also attached to the petition was a “research paper” titled: Environmental Effects of Increased Atmospheric Carbon Dioxide. ^[7]

The Oregon Petition's Disguise Attempt

The petition and the documents included were all made to look like official papers from the prestigious National Academy of Science ^[8]. They weren't, and this attempt to mislead has been well-documented.

The included research paper was also made to mimic the style of the National Academy's prestigious *Proceedings of the National Academy* journal.

With the signature of a former NAS president, and a research paper that appeared to be published in one of the most prestigious science journals in the world, many scientists were duped into signing a petition based on a false impression. In fact, the documents had been authored by [Art Robinson](#) [3], [Sallie Baliunas](#) [9], [Willie Soon](#) [10] (both who receive funding from the oil industry) and Robinson's son Zachary.

The petition was so misleading that the National Academy [issued a news release](#) [11] stating that: "The petition project was a deliberate attempt to mislead scientists and to rally them in an attempt to undermine support for the Kyoto Protocol. The petition was not based on a review of the science of global climate change, nor were its signers experts in the field of climate science."

The Oregon Petition and Big Tobacco

It's interesting to note that Fred Seitz, the author of the cover letter, is also the former medical advisor to RJ Reynolds medical research program. A [1989 Philip Morris memo](#) [12] stated that Seitz was "quite elderly and not sufficiently rational to offer advice."

However, nine years later, it seems that he was "sufficiently rational" to lead the charge on Robinson's Oregon Petition. It also seems that Seitz was still sufficiently rational to [sit as the Chair](#) [13] of [Fred Singer](#) [14]'s, [Science and Environmental Policy Project](#) [15].

Seitz [passed away](#) [16] on March 2, 2008, after spending his declining years working with global warming skeptics such as Fred Singer.

Fake Names including The Spice Girls

According to the May 1998 [Associated Press article](#) [17], the Oregon petition included names that were intentionally placed to prove the invalid methodology with which the names of scientists were collected.

The petition included the names of "Drs. 'Frank Burns' 'Honeycutt' and 'Pierce' from the hit-show M*A*S*H and Spice Girls, a.k.a. Geraldine Halliwell, who was on the petition as 'Dr. Geri Halliwell' and again as simply 'Dr. Halliwell.' "

In response to the issue of the fake names, Robinson said, "When we're getting thousands of signatures there's no way of filtering out a fake."

Articles on the Oregon Petition:

- [Scientific American: Skepticism about skeptics](#) [18].
- Kevin Grandia, "[The 30,000 Global Warming Petition Is Easily-Debunked Propaganda](#) [19]," *Huffington Post*, July 22, 2009.
- "[Guest post: scrutinising the 31,000 scientists in the OISM Petition Project](#) [20],"

SkepticalScience, March 11, 2010.

Tags:

[fred seitz](#) [21]
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[1] <http://epw.senate.gov/pressitem.cfm?party=rep&id=228016>
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 [26] <http://www.desmogblog.com/directory/vocabulary/3275>
 [27] <http://www.desmogblog.com/oregon-petition>



This is the print version of the [Skeptical Science](http://is.gtdDU11) article '[Over 31,000 scientists signed the OISM Petition Project](http://is.gtdDU11)', which can be found at <http://is.gtdDU11>.

What The Science Says:

The 30,000 scientists and science graduates listed on the OISM petition represent a tiny fraction (0.3%) of all science graduates. More importantly, the OISM list only contains 39 scientists who specialise in climate science.

Climate Myth: Over 31,000 scientists signed the OISM Petition Project

The Petition Project features over 31,000 scientists signing the petition stating "there is no convincing scientific evidence that human release of carbon dioxide will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere". ([OISM](#))

In early 2008, the [Oregon Institute of Science and Medicine \(OISM\)](#) published their [Petition Project](#), a list of names from people who all claimed to be scientists and who rejected the science behind the theory of anthropogenic (human-caused) global warming (AGW). This was an attempt to by the OISM to claim that there were far more scientists opposing AGW theory than there are supporting it. This so-called petition took on special importance coming after the release of the [Intergovernmental Panel on Climate Change's Fourth Assessment Report](#), and specifically the [Working Group 1 \(WG1\) report on the science and attribution of climate change to human civilization](#).

The WG1 report was authored and reviewed by approximately 2000 scientists with varying expertise in climate and related fields, and so having a list of over 30,000 scientists that rejected the WG1's conclusions was a powerful meme that AGW skeptics and deniers could use to cast doubt on the IPCC's conclusions and, indirectly, on the entire theory of climate disruption. And in fact, this meme has become widespread in both legacy and new media today.

It is also false.

According to the [Petition Project "qualifications" page](#), "Signatories are approved for inclusion in the Petition Project list if they have obtained formal educational degrees at the level of Bachelor of Science or higher in appropriate scientific fields." The fields that are considered "appropriate" by the OISM are as follows:

- **Atmosphere, Earth, and Environment fields:** atmospheric science, climatology, meteorology, astronomy, astrophysics, earth science, geochemistry, geology, geophysics, geoscience, hydrology, environmental engineering, environmental science, forestry, oceanography
- **Computers and Math:** computer science, mathematics, statistics
- **Physics and Aerospace:** physics, nuclear engineering, mechanical engineering, aerospace engineering
- **Chemistry:** chemistry, chemical engineering
- **Biochemistry, Biology, and Agriculture:** biochemistry, biophysics, biology, ecology, entomology, zoology, animal science, agricultural science, agricultural engineering, plant science, food science
- **Medicine:** medical science, medicine
- **General Engineering and General Science:** engineering, electrical engineering, metallurgy, general science

The OISM's qualifications for being a "scientist" are expansive, and as such there are a number of questions that have to be answered before we can take this list seriously. What expertise does a nuclear engineer or a medical doctor or a food scientist or mechanical engineer have that makes them qualified to have an informed opinion on the cause(s) of recent climate disruption? How many of these names are working climate scientists instead of science or math teachers or stay-at-home-mom's with engineering degrees? How many of these people has actually published a peer-reviewed paper on climate? How many people took a look at the card that served as a "signature" (click on the image to see a larger version) and realized that they could lie about having a science degree and their deception would never be discovered?

Petition

We urge the United States government to accept the 2007 emergency agreement that all members of the United States government, 1997 and 2001, have signed. The highest focus on this agreement must be the environment, science, the well-being of human and technological and biological life, and the well-being of the planet.

There is a serious and urgent climate change that must be taken care of immediately. We are asking you to sign a petition to support the United States government to accept the 2007 emergency agreement that all members of the United States government, 1997 and 2001, have signed. The highest focus on this agreement must be the environment, science, the well-being of human and technological and biological life, and the well-being of the planet.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

I have signed this petition in person.

At this point it's literally impossible to know because the names and degrees on the list cannot be verified by anyone outside the OISM. We can only take the OISM's word that they're all real names, that all the degrees are correct, and so on. This does not stand up to the most basic tests of scientific credibility.

Unfortunately, the OISM's list has had its credibility fabricated for it by individuals and groups as diverse as [Steve Milloy of Fox News](#) (see [this link](#) for a S&R investigation into the background and tactics of Steve Milloy), [L. Brent Bozell of conservative "news" site Newsbusters](#) and founder of the conservative Media Research Center, [Benita M. Dodd](#) of the Georgia Public Policy Foundation, the libertarian/conservative site [American Thinker](#) (a site that has [regularly failed to fact-check](#) their AGW posts), conservative commentator [Deroy Murdock](#) (who works on Project 21 with the wife of one of Steve Milloy's long-time associates), [RightSideNews](#), [Dakota Voice](#), [Dennis T. Avery](#) of the Hudson Institute, [Lawrence Solomon](#) of the Financial Post, [Michelle Malkin](#), and the [Competitive Enterprise Institute](#), to name just a few of the better known. As a result, the OISM's petition has been elevated to a level of credibility that is arguably undeserved.

While it's not possible to test the validity of OISM list directly, it is possible to test the conclusions that have been drawn from the OISM list. Specifically, we can test what percentage the 30,000 "scientists" listed on the OISM petition represent when compared to the total number of scientists in the U.S. And we can then compare that to the percentage represented by the 2000 IPCC AR4 WG1-associated scientists as compared to the estimate number of U.S. climate-related scientists.

According to the OISM website, anyone with a Bachelor's, Master's, or Doctorate of Philosophy in a field related to physical sciences is qualified as a scientist. In addition, the OISM sent the petition cards pictured above only to individuals within the U.S. Based on this information, we can use the OISM's own guidelines to determine how many scientists there are in the U.S. and what percentage of those scientists are represented by the OISM petition.

The U.S. Department of Education tracks the number of graduates from institutions of higher education every year, and has done so since either the 1950-51 or 1970-71 school years, depending on what specifically the Dept. of Ed. was interested in. This data was last updated in the [Digest of Education Statistics: 2008](#). We're specifically interested in the number of degrees that have been awarded in the various scientific disciplines as defined by the OISM in the list above. This information is available in the following tables within the 2008 Digest: 296, 298, 302, 304, 310, 311, and 312. Table 1 below show how many graduates there were in the various categories defined by the Dept. of Ed. since the 1970-71 school year (click on the image for a larger version). The numbers have been corrected to account for the fact that PhD's will usually have MS degrees as well, and that both are preceded by BS degrees.

	BS	MS	PhD	Total
Table 296 Degrees in agriculture and natural resources conferred	615,474	102,900	41,823	760,096
Table 298 Degrees in the biological and biomedical sciences conferred	1,784,108	74,872	155,111	2,014,091
Table 302 Degrees in computer and information sciences conferred	676,736	313,527	21,111	1,011,373
Table 304 Degrees in engineering and engineering technologies conferred	2,022,096	714,508	169,059	2,905,644
Table 310 Degrees in the health professions and related sciences conferred	1,590,449	871,249	68,381	2,529,078
Table 311 Degrees in mathematics and statistics conferred	456,873	87,773	23,552	568,198
Table 312 Degrees in the physical sciences and science technologies conferred	682,893	62,358	142,861	887,979
Total	7,617,295	2,237,687	632,611	10,487,593

As you can see, Table 1 shows that there were over 10.6 million science graduates as defined by the OISM since the 1970-71 school year. This is a conservative estimate as illustrated by the 242,000 graduates in biological and biomedical sciences from 1950-51 through 1969-70 alone, never mind the 166,000 engineering graduates, and so on. Many of these individuals are still alive today and would be considered scientists according to the OISM definition thereof.

The OISM website lists how many signatures they have for scientists in each of their categories. Given the number of graduates and the number of signatures claimed by the OISM, we can calculate the percentage of OISM-defined scientists who signed as referenced to the total. These results are shown in Table 2 below.

	Total Degrees	OISM Signatories in OISM	Percent
Table 296 Degrees in agriculture and natural resources conferred	760,096	1694	0.2%
Table 298 Degrees in the biological and biomedical sciences conferred	2,014,091	2900	0.1%
Table 302 Degrees in computer and information sciences conferred	1,011,373	243	0.0%
Table 304 Degrees in engineering and engineering technologies conferred	2,905,644	14970	0.5%
Table 310 Degrees in the health professions and related sciences conferred	2,529,078	2327	0.1%
Table 311 Degrees in mathematics and statistics conferred	568,198	893	0.1%
Table 312 Degrees in the physical sciences and science technologies conferred	887,979	8961	1.0%
Total	10,487,593	14,118	0.3%

In other words, the OISM signatories represent a small fraction (~0.3%) of all science graduates, even when we use the OISM's own definition of a scientist.

However, as mentioned above, it's entirely reasonable to ask whether a veterinarian or forestry manager or electrical engineer should qualify as a scientist. If we remove all the engineers, medical professionals, computer scientists, and mathematicians, then the 31,478 "scientists" turn into 13,245 actual scientists, as opposed to scientists according to the OISM's expansive definition. Of course, not all of them are working in science, but since some medical professionals and statisticians *do* work in science, it's still a reasonable quick estimate.

However, it's not reasonable to expect that all of those actual scientists are working in climate sciences. Certainly the 39 climatologists, but after that, it gets much murkier. Most geologists don't work as climate scientists, although some certainly do. Most meteorologists do weather forecasting, but understanding the weather is radically different than understanding climate. So we can't be sure beyond the 39 climatologists, although we can reasonably assume that the number is far less than the 13,245 actual scientists claimed by the OISM.

13,245 scientists is only 0.1% of the scientists graduated in the U.S. since the 1970-71 school year.

We can, however, compare the number of atmospheric scientists, climatologists, ocean scientists, and meteorologists who signed this petition to the number of members of the various professional organizations. For example, the [American Geophysical Union \(AGU\)](#) has over 55,000 members, of which over 7,200 claim that atmospheric sciences is their primary field. The OISM claims 152 atmospheric scientists. Compared to the atmospheric scientist membership in the AGU, the OISM signatories are only 2.1%, and this estimate is high given the fact that the AGU does not claim all atmospheric scientists as members.

The [AGU hydrology group](#) has over 6,000 members who call hydrology their primary field. The OISM list has 22 names that claim to be hydrologists, or 0.4%.

The [AGU ocean sciences group](#) claims approximately 6,800 members. The OISM has 83 names,

or 1.2%. And again, given that AGU membership is not required to be a practicing ocean scientists, this number is inflated.

The American Meteorological Society claims over 14,000 members and the OISM claims 341 meteorologists as petition signatories. That's only 2.4%.

It's clear that the OISM names don't represent a significant number of scientists when compared to either the total number of science graduates in the U.S. or to the number of practicing scientists who work in likely relevant fields. But that's not all.

Over recent years, various organizations have set out to estimate just how widespread the supposed "scientific consensus" on AGW actually is. Two recent efforts were conducted by the [Statistical Assessment Service \(STATS\) at George Mason University](#) and by the [Pew Research Center for the People and the Press](#). The [STATS survey](#) found that 84% of climate scientists surveyed "personally believe human-induced warming is occurring" and that "[o]nly 5% believe that that human activity does not contribute to greenhouse warming." The STATS survey involved a random sampling of "489 self-identified members of either the American Meteorological Society or the American Geophysical Union" and it has a theoretical sampling error of +/- 4%.

The [Pew survey](#) was taken in early 2009 and asked over 2000 members of the American Association for the Advancement of Science (AAAS) their opinion on various scientific issues, including climate disruption. 84% of AAAS respondents felt that "warming is due to human activity" compared to only 10% who felt that "warming is due to natural causes." The AAAS has over 10 million members, and the results of the survey are statistically valid for the entire population with a theoretical sampling error of +/- 2.5%.

84% of 10 million scientist members of the AAAS is 8.4 million scientists who agree that climate disruption is human-caused. 84% of the climate scientists (conservatively just the members of the atmospheric science group of the AGU) is, conservatively, 6,000 scientists who have direct and expert knowledge of climate disruption. The 13,245 scientists and 152 possible climate scientists who signed the OISM petition represent a small minority of the totals.

The IPCC AR4 WG1 report was written and reviewed by approximately 2000 scientists. If we assume that the 20,000 AGU members who claim to be atmospheric scientists, ocean scientists, or hydrologists represent the pool of potential experts in climate science in the U.S., then approximately 10% of all climate scientists were directly involved in creating the over 1000 page report.

That compares to less than 1% of all OISM "scientists" who mailed a pre-printed postcard.

A more recent survey of earth scientists asked the question "*Do you think human activity is a significant contributing factor in changing mean global temperatures?*". 97.5% of climatologists who were actively publishing papers on climate change responded yes. ([Doran 2009](#)). What is most interesting about this study was that as the level of active research and specialization in climate science increases, so does agreement that humans are significantly changing global temperatures.

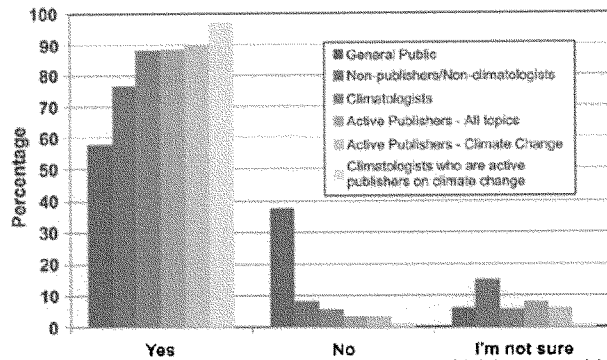


Figure 1: Response to the survey question "Do you think human activity is a significant contributing factor in changing mean global temperatures?" (Doran 2009) General public data come from a 2008 Gallup poll.

Ultimately, The OISM petition will continue to rear it's ugly head until its fabricated credibility has been thoroughly demolished. Social conservatives and libertarians, each of which has their own ideological reasons to push the OISM petition, have been effective at keeping the "30,000 scientists reject warming chicken-littleism of IPCC" meme circulating throughout conservative media outlets, even as [climate disruption-focused media](#) have worked at [limiting the damage](#) from the [OISM petition](#). But given the fact that the science supporting a dominantly anthropogenic cause for climate disruption is overwhelming, it's only a matter of time before the OISM petition wilts in the heat.

Acknowledgements to Brian Angliss at [Scholars and Rogues](#) who [guest wrote this post](#).



Skeptical Science explains the science of global warming and examines climate misinformation through the lens of peer-reviewed research. The website won the Australian Museum 2011 Eureka Prize for the Advancement of Climate Change Knowledge. Members of the Skeptical Science team have authored peer-reviewed papers, a [college textbook on climate change](#), and the book [Climate Change Denial: Heads in the Sand](#). Skeptical Science content has been used in university courses, textbooks, government reports on climate change, television documentaries and numerous books.



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The New York Times <http://nyti.ms/1rEAXSu>



U.S. | NYT NOW

Taking Oil Industry Cue, Environmentalists Drew Emissions Blueprint

By CORAL DAVENPORT JULY 6, 2014

WASHINGTON — In November 2010, three combatants gathered in a sleek office here to build a carbon emissions policy that they hoped to sell to the Obama administration.

One was a lawyer who had been wielding the Clean Air Act since his days at the University of California, Berkeley. Another had turned to practicing environmental law and writing federal regulations to curb pollution after spending a summer on a pristine island off Nova Scotia. The third, a climate scientist who is a fixture on Capitol Hill, became an environmentalist because of postcollege backpacking trips in the Rockies.

The three were as seasoned and well connected as Washington's best-paid lobbyists because of their decades of experience and the relationships they formed in the capital.

Over the next two years the lawyers, David Doniger and David Hawkins, and the scientist, Daniel Lashof, worked with a team of experts to write a 110-page proposal, widely viewed as innovative and audacious, that was aimed at slashing planet-warming carbon pollution from the nation's coal-fired power plants. On June 2, President Obama proposed a new Environmental Protection Agency rule to curb power plant emissions that used as its blueprint the work of the three men and their team.

It was a remarkable victory for the Natural Resources Defense Council, the longtime home of Mr. Doniger and Mr. Hawkins and, until recently, of Mr. Lashof. The organization has a reach that extends from the big donors of Wall Street to the elite of Hollywood (Leonardo DiCaprio and Robert Redford are on its board) to the far corners of the Environmental Protection Agency, where Mr.

Doniger and Mr. Hawkins once worked.

The group's leaders understand the art of influence: In successfully drafting a climate plan that heavily influenced the president's proposal, the organization followed the strategy used by the American Petroleum Institute, the lobbying arm of the oil industry, to write an energy policy for Vice President Dick Cheney during the Bush administration.

"The N.R.D.C. proposal has its fingerprints throughout this, for sure," said Dallas Burtraw, an energy policy expert at Resources for the Future, a Washington nonprofit, describing how the council's work influenced the proposed 650-page environmental regulation.

Representatives of the coal industry agreed. "N.R.D.C. is crafting regulatory policy for the E.P.A. that is designed to advance their agenda at the cost of American businesses and people who will pay the price through much higher electricity rates," wrote Laura Sheehan, a spokeswoman for the American Coalition for Clean Coal Electricity, a lobbying group. Scott Segal, who lobbies for the coal industry with the firm Bracewell & Giuliani, said in an email that the council's experts "have unprecedented access to this E.P.A. and are able to project influence down to the details of regulatory proposals and creative legal theories."

The U.S. Chamber of Commerce was so certain of the council's sway that it used the group's proposal as the basis for its economic analysis of what it expected in the E.P.A. rule, before the rule's actual release. "It is no surprise that N.R.D.C. has a great deal of influence on E.P.A. and the White House," Matthew LeTourneau, a chamber spokesman, wrote in an email.

Since its founding in 1970, the Natural Resources Defense Council has not sought the public profile of activist organizations like Greenpeace, but it has piled up a string of substantial legal and policy victories.

Its annual budget of about \$120 million is far higher than that of most environmental groups, in part because of board members like Mr. DiCaprio and Mr. Redford, who are the attractions at lavish fund-raising galas for studio heads and Silicon Valley magnates. In a typical event in 2011, guests at the Malibu home of Ron Meyer, now the vice chairman of NBCUniversal, sipped Champagne and watched surfers paddle out to form a peace sign in the Pacific Ocean. The event raised \$2.6 million.

The council's fund-raising office in New York has also found big donors in the business world, including at Google and Goldman Sachs. "With N.R.D.C., I would like to think I'm getting the best bang for the buck," said Alan F. Horn, the chairman of Walt Disney Studios and a member of the group's board. "These people are steeped in expertise."

Mr. Doniger, 62, has spent 40 years, as he put it, "using legal skills to combat pollution." He joined the Natural Resources Defense Council soon after graduating from law school at the University of California, Berkeley, and spent seven years as a senior clean-air lawyer at the E.P.A. during the Clinton administration. He went back to the environmental group during the Bush administration and in 2007 helped write the legal briefs for a landmark Supreme Court case upholding the E.P.A.'s authority to enact climate-change regulations.

Mr. Hawkins, 71, quit Columbia University's law school but returned after living with his wife on MacLeans Island, off Nova Scotia. "It made me appreciate how magical the cycles of natural systems were, and I knew I wanted to go back and do environmental protection with my law degree," he said. He worked at the E.P.A. in the Carter administration, where he developed regulations to cut soot and smog from smokestacks, angering industries.

Mr. Lashof, 54, who has a Ph.D. in energy and natural resources from Berkeley, worked at a government solar-energy laboratory in Colorado, where hikes in remote pockets of the Rockies spurred his interest in the environment. This year he became chief operating officer at NextGen Climate, the "super PAC" run by the billionaire environmentalist Tom Steyer.

Together the three men and their team worked in the group's green 15th Street office — the space includes an energy-saving lighting system and an indoor garden wall of plants — to conceive the novel idea at the heart of Mr. Obama's climate-change rule. Rather than impose a uniform national standard for reducing power-plant carbon emissions, the regulation sets different limits for each state and allows states the flexibility to meet the standards by picking from a menu of policy options — including creating state programs that require power plants to pay a fee for their carbon pollution; installing new wind and solar power; and making appliances, lighting and air conditioning more energy efficient. Once enacted, such a plan could do far more than just shut down coal plants; it could spur a transformation of the nation's electricity sector.

"It's remarkable, it's novel, it's really controversial, and that's the centerpiece of the N.R.D.C. approach," said Charles Knauss, an environmental lawyer and a former Republican congressional counsel on clean-air law. But Mr. Knauss and others said the rule's structure also made it more vulnerable to lawsuits. While clean-air regulations have historically prescribed specific remedies to cut smokestack pollution, the N.R.D.C. approach allows states unprecedented flexibility, creating multiple openings for legal attack.

To crunch numbers, the council hired the same statistics firm used by the E.P.A. in order to ensure that the agency could more easily adopt the plan. The cost, Mr. Doniger said, was "a few hundred thousand dollars."

The E.P.A. said the Natural Resources Defense Council did not wield outside influence in shaping the regulation. When preparing the climate-change rule, the agency sought comments from hundreds of groups, including environmental advocates, state regulators, electric utilities and the coal industry, while dozens of E.P.A. analysts and legal experts worked on the plan.

"We had 5,000 conversations," said Joseph Goffman, the E.P.A.'s top clean-air lawyer. "It's impossible to say there was any one thing. The E.P.A.'s plan, for example, does not cut pollution as quickly or deeply as the council's proposal.

Indisputable, however, is that the Natural Resources Defense Council was far ahead of the E.P.A. in drafting the architecture of the proposed regulation.

By late 2012, Mr. Doniger, Mr. Hawkins and Mr. Lashof had finished their proposal and began to travel across the country to present it to state regulators, electric utilities, executives and anyone else they expected to have a hand in shaping the rules. In Washington, Mr. Doniger briefed Mr. Goffman at the E.P.A. and Mr. Obama's senior climate adviser at the time, Heather Zichal.

"The goal was to move this idea very quickly into the public conversation and affect as many people's thinking as possible," Mr. Doniger wrote in an email.

E.P.A. officials did not start working in earnest on the rule until fall 2013, when they held sessions around the country to hear from regulators, utilities and many others the Natural Resources Defense Council had by then been briefing for months. Many told the E.P.A. that they wanted to see an innovative plan like the one they had heard about from the council, even if they did not specifically name it as the group's plan.

Taking Oil Industry Cue, Environmentalists Drew Emissions Bluepri... <http://www.nytimes.com/2014/07/07/us/how-environmentalists-drew...>

"They were the first out of the gate," said Adam Kushner, a former top legal official at the E.P.A. "And the first out of the gate frames the debate."

A version of this article appears in print on July 7, 2014, on page A9 of the New York edition with the headline: Taking Oil Industry Cue, Environmentalists Drew Emissions Blueprint.

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David Doniger's Blog

Does NRDC Operate Like the Oil Industry? Not on Your Life

Posted July 8, 2014 in [Curbing Pollution, Solving Global Warming, U.S. Law and Policy](#)

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The *New York Times* ran a very nice article yesterday about NRDC's part in developing an innovative proposal for curbing carbon pollution from America's 1600 fossil fuel-fired electric power plants – the nation's largest source of the pollution that's driving dangerous climate change.



We're proud to have played a role, and we're glad to have kicked things off with our December 2012 report. But as it's often said, success has many parents.

It turns out that many of the hundreds of stakeholders EPA consulted over the past year have proposed recipes with the same basic ingredients:

- A fair approach that recognizes state-to-state differences in how our power is generated, and

- A flexible approach that captures all effective ways to cut carbon pollution – e.g., cleaning up existing plants, using cleaner resources first, building out zero-emitting plants, and reducing energy waste.

But (and there's always a but!) I have to take issue with the first half of the headline in the *Times* story: "Taking Oil Industry Cue..." The story goes on to say that we "followed the strategy used by the American Petroleum Institute, the lobbying arm of the oil industry, to write an energy policy for Vice President Dick Cheney during the Bush administration."

Sorry, our strategy was entirely different.

In 2001 API and other big polluters sent *secret proposals* to the Cheney Task Force, seeking to profit from rolling back public health and environmental protections. In 2012 we published our carbon-cutting proposal *openly and publicly*, aiming to protect our children's health and future.

We didn't hide behind closed doors. You can see us on YouTube at the National Press Club.

As I told the *Times*: "The goal was to move this idea very quickly into the public conversation and affect as many people's thinking as possible."

June, from Charleston, SC, grasped the difference, in a comment posted on the *Times* story:

If they were following the oil industry practices, they would hold numerous secret meetings with the V.P. whom would have a personal stake in their success; they would never allow opposing voices in their meetings The fact that these meetings are already in the news indicates they are not following the oil

Does NRDC Operate Like the Oil Industry? Not on Your Life | Davi... http://switchboard.nrdc.org/blogs/ddoniger/does_nrdc_operate_like_...

industry practices.

And Bill, from Charlottesville, summed it up nicely:

Now the NRDC is following the energy industry's lead - sending in lobbyists to write legislation so as to line their pockets and satiate their own greed.

No, that's not the reason.

Hold on, it'll come to me...

Public service! That's it. The scoundrels!

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EPA FACT SHEET: Clean Power Plan

BY THE NUMBERS

CUTTING CARBON POLLUTION FROM POWER PLANTS

On June 2, 2014, the U.S. Environmental Protection Agency, under President Obama's Climate Action Plan, proposed a commonsense plan to cut carbon pollution from power plants. The science shows that climate change is already posing risks to our health and our economy. The Clean Power Plan will maintain an affordable, reliable energy system, while cutting pollution and protecting our health and environment now and for future generations.

Cleaning Up Power Plants

- Power plants are the **largest source** of carbon dioxide emissions in the United States, making up roughly **one-third** of all domestic greenhouse gas emissions.
- All told—the Plan puts our nation on track to cut carbon pollution from the power sector by **30 percent** by 2030—that's about **730 million metric tonnes** of carbon pollution.
- That's equal to the annual emissions from more than **150 million cars**, or almost **2/3s of the nation's passenger vehicles** – or the annual emissions from powering **65 million homes, over half the homes in America**.

Big Public Health and Climate Benefits

- The Clean Power Plan has public health and climate benefits worth an estimated **\$55 billion to \$93 billion** per year in 2030, far outweighing the costs of **\$7.3 billion to \$8.8 billion**.
- Reducing exposure to particle pollution and ozone in 2030 will avoid a projected
 - **2,700 to 6,600** premature deaths
 - **140,000 to 150,000** asthma attacks in children
 - **340 to 3,300** heart attacks
 - **2,700 to 2,800** hospital admissions
 - **470,000 to 490,000** missed school and work days
- From the soot and smog reductions alone, for every dollar invested through the Clean Power Plan—American families will see **up to \$7** in health benefits.

- The Clean Power Plan will reduce pollutants that contribute to the soot and smog that make people sick by **over 25 percent** in 2030.
 - **54,000 to 56,000 tons** of PM_{2.5}
 - **424,000 to 471,000 tons** of sulfur dioxide
 - **407,000 to 428,000 tons** of nitrogen dioxide

Number of power plants covered by the Clean Power Plan

- In the U.S., there are **1,000 fossil fuel fired power plants** with **3,000 units** covered by this rule.
- Utility planners are already making plans to address an aging fleet. The average age of coal units is **42 years**. The average age of oil units is **36 years**. The average age of natural gas combined cycle units is **14 years**.

State climate, energy efficiency and renewable energy policy statistics

- States, cities and businesses have set energy efficiency targets, increased their use of renewable energy, and made agreements to cut carbon pollution. These are the kinds of programs that states will be able to use to cut carbon pollution under this proposal.
 - **47** states with utilities that run demand-side energy efficiency programs
 - **38** states with renewable portfolio standards or goals
 - **10** states with market-based greenhouse gas emissions programs
 - **27** states with energy efficiency standards or goals

Proposed State Plan Dates

June 30, 2016 – Initial plan or complete plan due

June 30, 2017 – Complete individual plan due if state is eligible for a one-year extension

June 30, 2018 – Complete multi-state plan due if state is eligible for two-year extension (with progress report due June 30, 2017)

THE AUSTRALIAN

Green dream on ice as 'coal frenzy' grips Europe and renewables lose their attraction

GRAHAM LLOYD THE AUSTRALIAN JANUARY 11, 2014 12:00AM

IT'S been a black Christmas for green thinkers as Germany, the world leader in rooftop solar and pride of the renewable energy revolution has confirmed its rapid return to coal. After scrapping nuclear power, Germany's carbon dioxide emissions are back on the rise as the country clamours to reopen some of the dirtiest brown coalmines that have been closed since the reunification of east and west.

×

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NATURAL RESOURCES DEFENSE COUNCIL
THE EARTH'S BEST DEFENSE

Slower, Costlier and Dirtier A Critique of the Bush Energy Plan

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Executive Summary

President Bush's energy plan offers a smorgasbord of incentives for the energy industry, emphasizing the supplies and renewing a commitment to nuclear power. The administration's proposal -- prepared by Vice also includes modest proposals related to energy efficiency and renewable energy sources. However, it is recent speech, the Bush administration views conservation as perhaps a "sign of personal virtue," but "no comprehensive energy policy."

"Slower, Costlier and Dirtier: A Critique of the Bush Energy Plan" was drafted by a team of NRDC experts areas. It is intended to be a guide to some of the most critical environmental, health and energy issues aff responds to statements made by senior administration officials during the development of the plan, and a days to come, NRDC will continue to review the text of the Bush plan, and will provide additional analysis

Our review shows that the Bush energy policy is fundamentally flawed. The Bush plan would provide no s to pay their gasoline and electric bills this summer. And, over the long-term, it would increase pollution, de health and accelerate global warming. Moreover, it would have no impact on energy prices, and no practi sources of oil. Who would benefit? The oil, coal and nuclear industries that shoveled millions of dollars int

Fortunately, there is a better way. Our nation can meet its energy needs without undermining environmen: remaining pristine wilderness areas in the country. The cornerstone of a responsible approach is increas that relies on readily available, cost-effective technologies. Correspondingly, NRDC and other environmer on the dirtiest fossil fuels -- coal and oil.

Although Vice President Cheney claims we have to build 1,300 electric power plants over the next 20 yea Energy report found that energy efficiency and renewable power sources could meet 60 percent of the na

Increasing the energy efficiency of appliances would also save money and reduce air pollution. Unfortuna efficiency standards for new air conditioners issued by his predecessor, a step that by itself will force cons 2020, cost consumers as much as \$900 million in higher electric bills in that year, and generate an extra 1 emissions over the next three decades.

Finally, the administration seems content to wait and study the need for increasing fuel economy of the na vehicles. NRDC believes that it is time to move beyond studies. Improving average fuel economy to 40 m fuel than might be economically recovered from the Arctic National Wildlife Refuge -- a proposal that has administration's energy policy for months.

The bottom line is that the quickest, cleanest and cheapest way to meet our energy needs is a program th fuel economy, and invests in renewable energy sources.

It is doubtful such views received a fair hearing at task force meetings. The conclusions of the Cheney task force process. When NRDC filed a Freedom of Information Act request for documents identifying members of the task force members, the Department of Energy denied the request.

Ironically, the administration of President George H.W. Bush published its National Energy Strategy 10 years ago. The strategy was developed in secrecy. The first Bush administration held 18 public hearings throughout the nation, and greater efficiency in every element of energy production and use."

Forbes magazine said in May that "there is no energy crisis and there is little reason to expect there will be one. While California's blackouts are in the headlines, the Golden State's problems are local and not national." The magazine went on to say that there is no supply problem, that between 1980 and 2000 energy prices rose 90 percent while gross domestic product jumped 90 percent, and over those two decades energy prices rose 119 percent.

Crisis or not, we welcome the opportunity for a public debate over America's energy future. But that debate should be an honest one, free from the taint of backroom deals and political payoffs. From our initial review, the Cheney task force's energy plan would fulfill the wildest dreams of the oil and coal industries at the expense of the environment. Nevertheless, we remain hopeful that the coming months of public debate will open the door to a more honest energy policy that meets our energy needs and improves environmental quality and the health of our citizens.

In the pages that follow, NRDC presents a summary of the Bush energy proposal's most critical components. Alternative approaches are summarized below:

Overall Impacts

The Bush plan will accelerate CO₂ emissions that cause global warming, damage public health, and exacerbate America's energy problems. It won't keep the lights on in California this summer, it won't lower consumers' energy bills, and it won't improve the environment.

Coal

The Bush plan is a bad idea for America's health and environment. It would allow poorly controlled and unregulated coal plants to expand their pollution dramatically and unnecessarily, and it would expand our reliance on the dirtiest form of power generation. Coal for power generation means more deaths from particulate air pollution and more poisoned water and air. The administration also ignores the fact that energy efficiency and renewable power could satisfy as much as 80 percent of demand for electricity over the next 20 years.

As described more fully in the electric power section, the Bush energy plan promotes a 10-year, \$2-billion technology, first proposed in the president's budget. Even if the Energy Department's research and demonstration "clean coal" plants still will emit more pollution than alternative technologies -- natural gas plants and renewable energy -- says the objective is to make coal-fired electricity less polluting, the president's budget documents reveal that the plan would increase coal use for power generation in the United States" (emphasis added). Expanding coal use will further increase global warming.

Drilling in the Arctic Refuge

The case for drilling in the Arctic National Wildlife Refuge makes no sense. Drilling would do nothing to meet America's long-term energy needs. Plus, the administration overstates the amount of oil in the refuge. In fact, there is only a six-month supply of economically recoverable oil in the refuge's coastal plain. Drilling in the Arctic Refuge would cause permanent and unnecessary environmental damage, would do nothing to add to our energy supply, would not affect the price of gasoline at the pump, and would not significantly reduce our dependence on foreign oil.

Drilling in the Outer Continental Shelf (OCS)

The Bush plan calls for a review of statutes, regulations and executive orders pertaining to Outer Continental Shelf (OCS) oil and gas leasing. The Interior Department's recommendation sets the stage for lifting the OCS moratoria that protect the East and West Coasts, Alaska, and the Gulf of Mexico off Florida from new leasing. It also could lead to actions that would weaken environmental protection and allow more harmful OCS activities off their coasts.

There is no justification to lift the OCS moratoria. NRDC also opposes offshore oil and gas activities in other areas.

moratoria, including the Sale 181 area off Florida and the OCS off Alaska. Drilling in these areas poses oil spills, air and water pollution, seismic impacts and onshore damage. Drilling is not necessary, given that the untapped economically recoverable oil and 80 percent of the untapped economically recoverable natural gas that are currently open to the oil industry.

Drilling on Public Lands

The Bush plan would be a recipe for widespread industrialization of rural areas across the Rocky Mountain West -- including spectacular wildlands, habitat for deer, antelope and other wildlife, and water quality. We don't need to drill in sensitive areas. The vast majority of the public lands managed by the Bureau of Land Management -- about 95 percent -- are open for leasing and development. In addition, the gas in the Rockies amounts to less than 2 percent of the nation's total gas resources. Millions of acres of federal land are currently open to oil and gas.

Electricity Infrastructure America does not need to override state and local decision-making to spur a massive expansion of new power lines as the Bush administration has proposed. Such development threatens environmentally sensitive areas. Extensive transmission lines are being built already. Greater power line capacity could also be achieved by removing regulatory rollbacks proposed by the Bush administration to speed up line construction are unnecessary and could p

Electric Power

The Bush energy plan takes aim at a key clean air rule, called "new source review," which safeguards air quality when power companies expand their plants without modern pollution controls. The Bush energy plan asks the Department of Energy, and other agencies to weaken Clean Air Act rules and interfere with enforcement of the law. Power companies should continue to be required to install pollution controls when they expand their plants and increase pollution significantly.

The Bush energy plan is a recipe for more pollution and higher utility bills. It is founded on a supply-biased policy of building new power plants. However, an alternative policy, emphasizing energy efficiency and renewable power, could lower Americans' electric bills by \$30 billion per year, and significantly cut all forms of greenhouse gas emissions. According to a November 2000 Department of Energy Report, "Scenarios for a Clean Energy Future," energy efficiency and renewable power can meet 60 percent of the nation's need for new electric capacity. Moreover, an energy policy that takes advantage of efficiency and renewable energy sources could lower utility bills, cut CO₂ pollution by one-third, and slash emissions of other pollutants in half.

Under the Bush plan, the power sector's contribution to global warming will grow ever larger each year. Bush campaign promise to curb power plant emissions of CO₂, his energy plan now offers only a vaguely defined goal. CO₂ emissions from power plants meets neither environmental nor business needs. This three-pollutant plan will not stop power plant CO₂ emissions by 2020. Bush plan envisions a 35 percent increase in power plant CO₂ emissions by 2020.

Fuel Economy for Vehicles

Americans are facing the prospect of record-breaking gasoline prices this summer, yet the Bush plan does not do more important, to ensure improvements in the fuel economy of the cars that Americans will buy in years to come. Fuel cell vehicles proposed in the Bush plan are helpful to spur expanded use of these technologies, but it does not increase in fuel economy standards.

While the traditional surge in summertime driving means there's little that can be done to reduce gas prices, the administration should move quickly to close the SUV loophole immediately -- and then increase overall fuel economy standards for the decade. Doing so would save more than 50 billion barrels of oil over the next 50 years -- more than 10 percent of the economically recoverable oil in the Arctic Refuge. In contrast, the Bush plan merely follows the law in directing the EPA to consider a forthcoming report by the National Academy of Sciences.

Nuclear Power

As part of its new energy policy, the Bush administration wants to try to revive the moribund nuclear power industry and high costs. Trying to solve U.S. energy problems by increased reliance on nuclear energy will be too costly for consumers. The Bush plan fails to address the four major obstacles that have dogged nuclear power: long-term proliferation risks; reactor safety issues remain unresolved; the United States has no long-term plan for spent nuclear fuel; and the nuclear power industry is not competitive with a host of cleaner and cheaper technologies and re

survive.

Oil Refineries

As mentioned above, the Bush energy plan takes aim at a key clean air rule, called "new source review," that has resulted in vast increases in pollution from oil company plans to expand their plants without modern pollution controls. Inviting the oil, utility and coal industries, the Department of Energy, and other agencies to weaken Clean Air Act enforcement cases, the administration should not disrupt enforcement of the law. Oil refiners should control air quality at the-of-the-art pollution controls when they expand their plants and increase pollution significantly.

Reformulated Gasoline

The Bush energy plan seeks to reduce the number of so-called "boutique" fuels that are sold in many regions. NRDC supports a shift to a regional or national specification for reformulated gasoline -- so long as it does not compromise critical health protections provided by cleaner gasoline. NRDC does not support allowing companies to increase profits.

Renewable Energy

The Bush plan offers limited support for renewable energy technologies, despite their enormous potential. Wind and solar are the fastest growing energy sources in the United States and the emerging success is that they can be brought online very quickly to help California and other states meet megawatt (MW) wind farm project on the Oregon-Washington border was announced earlier this year, as well as Energy's nuclear test site in Nevada. Both should be supplying badly needed power to the Western grid.

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